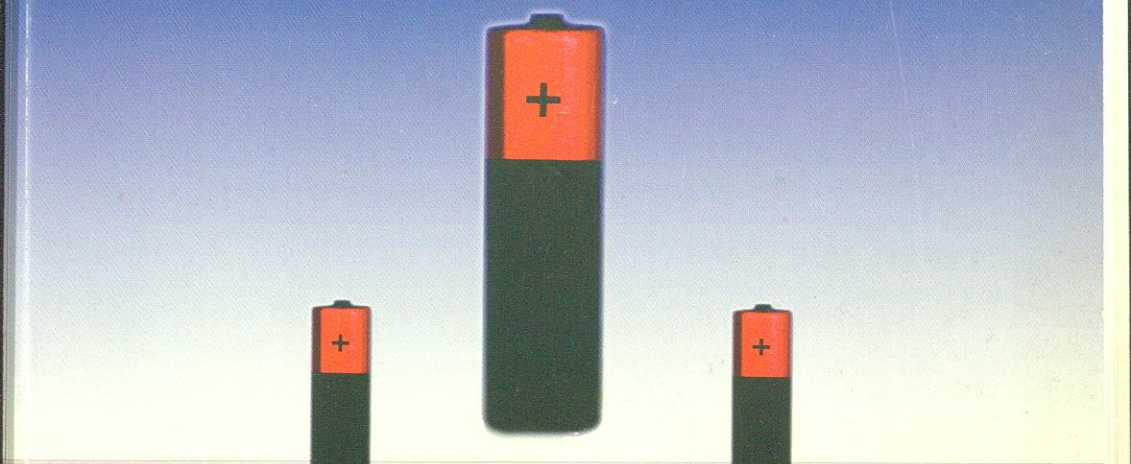
Palmtop

The journal for today's Psion user

Issue 23 March/April 1999



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The inside story on powering your palmtop

New EPOC machines announced —photos inside!

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(Volume 4, issue 5)

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Editorial

There are massive rumblings in the Psion world at the moment. In fact it's rumbling fit to burst. With new EPOC machines due for release within a matter of weeks, including those from Ericsson and Oregon Scientific, it looks like the long-awaited EPOC explosion is about to take place.

The next 6-12 months will most certainly see new EPOC-based machines from Nokia and Motorola (the other Symbian partners), plus new sub-notebook machines and keyboardless terminals from Psion Industrial—see page 6. Against a backdrop of burgeoning growth in the mobile telephone market, EPOC and Symbian have never looked more poised for success.

The fact that Psion Computers have now gone almost two full years without the launch of a new flagship product is significant to *them*, and they've most certainly lost some market share as a result, but Symbian is now far bigger than Psion alone. Indeed, I can see a situation whereby Psion themselves eventually become smaller players in a much larger market. The Nokias, Ericssons and Motorolas of this world are most certainly capable of building higher quality hardware, have marketing budgets bigger than Psion's entire net worth, and by virtue of their size alone are better placed to confront the Microsoft juggernaut.

Psion's eventual fate will be a mere drop in the EPOC ocean in such a scenario, with their powerful and robust operating system continuing to enjoy a vigorous life within numerous non-Psion guises. Existing Psion users needn't be dismayed by such a prospect, any more than PC owners should be worried if IBM, the original architects of the personal computer, were to fade away. With the impetus of the ever-growing Symbian behind it, we can all expect to be using variants of Psion's legacy EPOC technology for some years to come.

The future's bright. The future's EPOC.

Steve Clack
April 1999

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Additional photography - John Powell

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Newsreel

What's new in the Psion world...

Psion annual report

Psion PLC's annual report and financial results for 1998 have recently been released, showing an increase in turnover of 13% for the year (£159.9 million, up from £142.0 million in 1997).

David Potter, Chairman, commented "Psion Computers had a difficult year in 1998 with changing market conditions. The competitive threat from Windows CE-based handheld computers diminished as those products failed to establish a significant market presence. At the lower end of the market Palm Pilot products established wide market acceptance, particularly in North America. Notwithstanding this, Psion maintained its leadership in Europe with the Series 5 range. Psion's market share in Europe for the first half of 1998 was estimated by IDC to be 59%. Sales of the Series 3 machines declined.

Psion Dacom achieved rapid growth during the year (93%), particularly through supply agreements with major notebook computer manufacturers. Manufacturing capacity was expanded whilst unit sales increased from 300,000 in 1997 to 800,000 units. Psion Industrial had a successful year with good growth in sales and profits.

We expect products based on EPOC to ship in volume during the year 2000 but we must wait for the acceptance of these products before recognising the success of this exciting investment."

Palmtop BV gets ESD

Major Psion software authors, Palmtop BV, are now offering most of their products via ESD (Electronic Software Distribution), enabling customers to purchase and download software directly from their web site.

www.palmtop.nl

Flight Manager now shipping

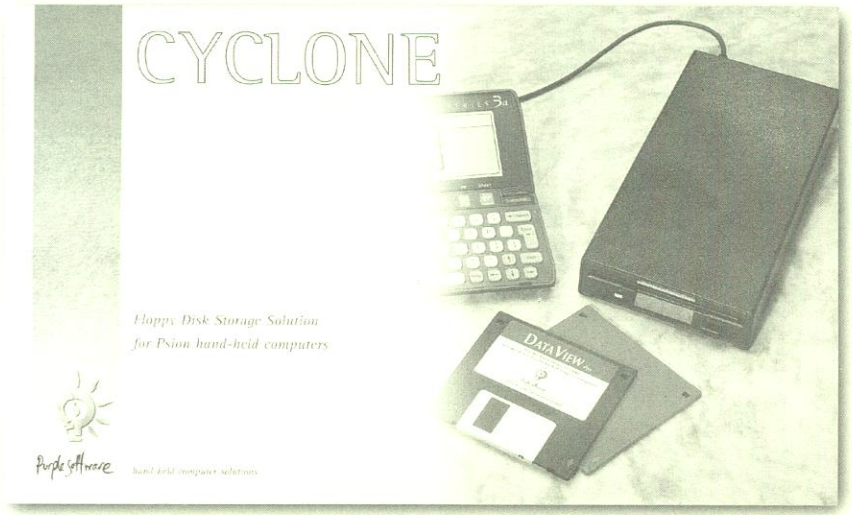
Palmtop BV's long-awaited Flight Manager software is finally shipping. The program can either be downloaded using BV's new online ESD system, or direct from Widget Software and Clove Technology in the UK, and New World Technologies in the USA. Price for the basic product is $79 (around £40), with additional 6 month and 12 month update subscriptions costing $96 and $168 respectively. Once paid for, updates are automatically issued by email on a monthly basis.

Palmtop BV downloads: www.palmtop.nl
Widget Software: 01438 818800
Clove Technology: 01202 302796
New World Technologies: 800 886 4967 (USA)

CF disks now up to 128MB

CompactFlash cards manufactured by Simple Technology are now readily available in both 96MB and 128MB sizes, priced at around £220 and £280 (plus VAT) respectively.

Simple Technology: 01355 354608



Cyclone drive drops in price

Purple Software's popular Cyclone floppy disk drive for the Series 3 range and Siena has been dropped in price to £99.95 including VAT. This price is available only from Purple Software direct, or from Widget Software.

Purple Software: 0171 387 7777
Widget Software: 01438 818818

Luach

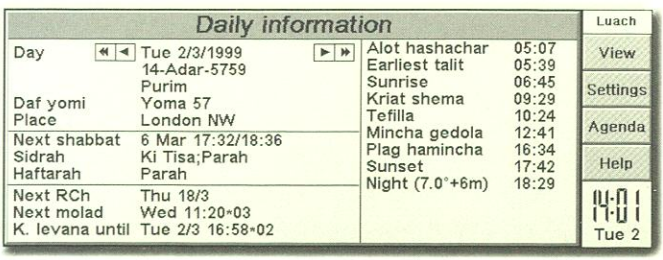
On-Board Info have just released a new Series 5 compatible version of Luach - the Hebrew calendar program, which calculates and writes to your Psion Agenda all Jewish calendar items. Price £29.95. Details

On-Board Info: 0171 370 0307
www.on-board-info.com

World's smallest 56K modem

3Jtech have announced the world's smallest and only 56K/V.90 universal external modem for use with all PDAs, including Psions. The Pegasus II comes complete with all necessary

continued on page 10...



On-Board Info's Luach Hebrew calendar, now available for the Series 5

CeBIT report - Hannover, Germany

During March this year, 7341 exhibitors demonstrated their products at the world's largest computer and IT show, CeBIT, in Hannover, Germany.

This was the first time Psion had presented themselves at *three* separate booths. The biggest was held by Psion Computers, who build the Series 3 and Series 5 ranges, and Psion Dacom, who develop the Gold Card modems. The second booth was held solely by Psion Dacom and the third by Psion Industrial, manufacturers of the Work*about* range. The latter were displaying a new Workabout RF computer with Spread Spectrum-IEEE802.11 technology and some other new add-ons.

Psion's big announcement at CeBIT was "Psion goes Java". Symbian, the joint-venture of Psion, Ericsson, Nokia and Motorola, announced an alliance with Sun Microsystems which involves the porting of Java technology to EPOC.

Symbian goes Java crazy

"Symbian has been working on Java for EPOC for four years now", said Mr Hans Stadler, Managing Director of Psion GmbH. The Java applications retain the familiar look and feel of EPOC applications, even though Symbian supports the full enterprise API suite of Java. Three prototypes which will work with the Java-enabled version of EPOC, shown at the Psion Industrial booth, will go into production before the end of this year. At the moment Psion is planning to release the new devices for corporate use only, but the next Series 5 is slated to get the same Java Virtual Machine built-in.

Three prototype Java-enabled Psion machines on show at CeBIT

Corporate sub-notebooks and more...

"The target group are banks, insurance companies and all other companies that have field services", Mr Joachim Kaluza, Marketing Communication Manager of Psion Germany, said. "We estimate around 40 million jobs today in this field in Europe alone. By the year 2003, 600-800 million devices will be used worldwide, and we expect around 10-15% to be using EPOC." Mr Stadler also commented that the automobile industry is very interested in the Java devices too. The combination of EPOC and Java is an attractive solution not only for direct customers, but also for Symbian licensees.

The sub-notebook device codenamed *Jedi* (see bottom of photo opposite) has a full VGA colour touch-sensitive screen, 24MB of RAM and employs a StrongARM processor running at 140MHz. The production machine may run at up to 200MHz and sport up to 32MB of on-board RAM. For access to a company network the Jedi can be attached to its own docking station. The prototype shown had a built-in modem, Type II CompactFlash slot (which supports the miniature hard disk drives being developed by IBM) and a single PC Card slot. The battery pack will offer at least ten hours of operation.

Companies interested in one of the new keyboard-less devices (see opposite) can choose between ¼, ½ or full VGA screens, pen or keyboard input and GSM or wireless local area radio communications based on the emerging *Bluetooth* standard.

Banished rumours

The rumours of a new *Series 5mx* machine that went around the globe one week before CeBIT didn't become a reality. Instead, Psion Computers showed their existing product range of the Series 3mx and Series 5. Also on show alongside the hardware was Purple Software's *PowerBase*, Palmtop BV's *Street Planner '99* and Atelier's popular *SimCity* game, together with the *Lexacom Sync!* plug-in synchroniser for PsiWin 2.2. Developed by Lexacom Inc. it allows Series 5 or Series 3 AGENDAs and to-do lists to synchronise with *Netscape Calendar*, *CorporateTime*, *OpenTime* and *Lexacom Calendar*.

Oregon Scientific

In the last issue of *Palmtop* we reported on the forthcoming *Osaris* EPOC-compatible machine to be built by Oregon Scientific, first seen at the CES '99 show in Las Vegas earlier this year. It wasn't surprising to see it at CeBIT, too. Physically a little bigger than the Series 5, the display resolution is lower (but less elongated than the Series 5's, at 320x200 pixels, as opposed to 640x240), with the same 16 shades of grey.

It is interesting to note that the Osaris' ROM version was labelled as *1.02* and had some previously unseen features including a new *Jotter* application and outlining in WORD. At first Oregon Scientific will release an English version of the machine during May/June, followed by German, French, Italian and Spanish variants a month later. At the moment the biggest problem is that most software designed for the Series 5 doesn't run well on the Osaris, because of the different screen size. Mr Dominic Algovia-Baumann from Oregon

Scientific Germany told us that software houses such as Palmtop BV and Purple Software are already working on Osaris-compatible applications.

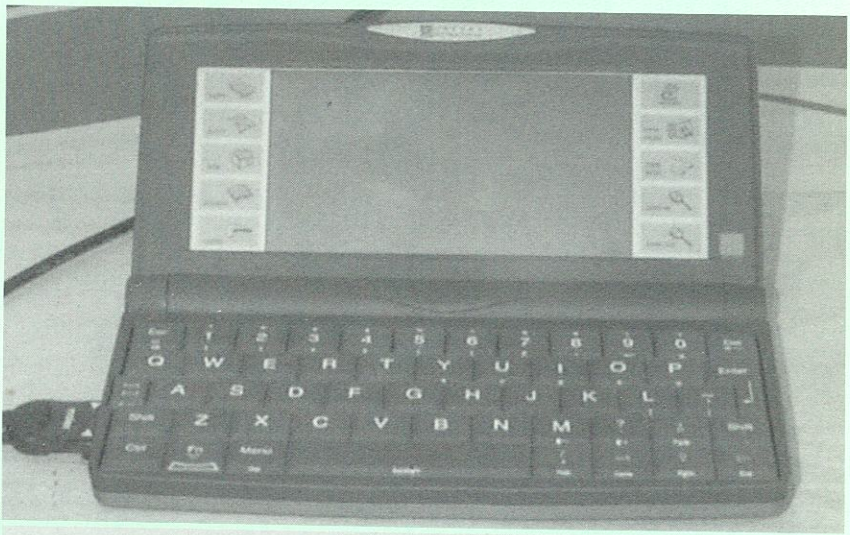
Ericsson goes EPOC

Ericsson were also at CeBIT, showing their recently announced *MC218* palmtop. This 'Mobile Companion' looks almost identical to the Series 5 and will even be manufactured by Psion under license. This is very significant as the first 'MC' computer from Ericsson was a Windows CE device manufactured by HP—and now Ericsson are using EPOC.

Upgraded/new applications

Only a few cosmetic differences were discernable between the MC218 and Series 5, such as a black case and slightly different buttons around the screen. In direct comparison, the screen of the MC218 appeared a little better than that of the current model Series 5. The operating system and built-in EPOC applications have been developed beyond the existing Series 5—the MC218 on display had a full 16MB of RAM and 18MB of ROM. Unfortunately, the version number was hidden from view, but it was most certainly more advanced than the one used on the Osaris.

The built-in Message Suite Internet application on the Ericsson was labelled as version 2.0 and supports SMS messages directly and frames in the web browser. Other new features for EPOC include sorting in SHEET, outlining and Jotter (as with the Osaris) plus a new *Contacts* application which stores addresses and contact details in a separate database application. The existing DATA software was still present, in addition to this dedicated address book/contact manager.



The Oregon Scientific Osaris

Digital camera support

Another new application, *Postcard*, is used to import pictures from a digital camera via the IrDA interface. You can edit the picture, attach it to an email and send the message using your mobile phone. *My Phone* is the bridge for any Ericsson mobile phone, allowing you to change settings, synchronise phone numbers between the two devices and dial the phone via the MC218.

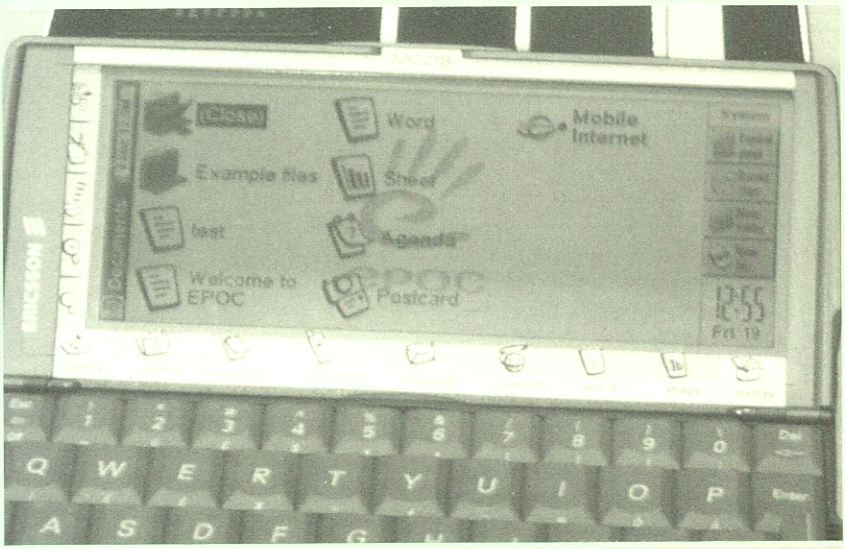
WAP-enabled

With the MC218 you even have access to the new *WAP* web sites. WAP (Wireless Application Protocol) allows a quick transfer even if you use a mobile phone at only 9600 baud. To support WAP, Ericsson has put a second web browser in their ROM. Even the processor of the MC218 appeared much faster than that of the current Series 5, opening a large AGENDA file in around one third of the time.

The MC218 should be available from June/July in four languages: English, German, French and Spanish.

On 18th March, Ericsson also unveiled a new smart phone, again using the EPOC operating system. The *R380* is a dual band mobile phone with in-built modem and infrared communications, and supports WAP pages just like the MC218. Flipping down the numeric keypad reveals a backlit LCD screen. The keyboard-less R380 uses handwriting recognition for data entry. Basic built-in software such as address book, calendar, notepad, calculator and alarm clock are all present, as well as email and SMS applications. The phone will be available in volume early next year.

Sebastian Hochstetter, Germany



Ericsson's MC218

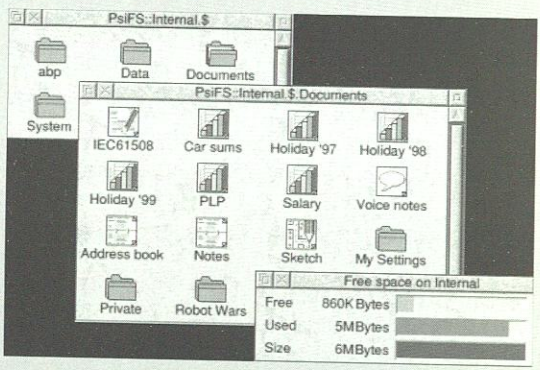
continued from page 5...

cables. Contact 3Jtech directly for pricing and availability, or Exportech within the UK, who are selling the unit at £99 plus VAT.

3Jtech: +1 626 575 8899 (USA)
Email: sales@3tech.com
Exportech: 01202 422570

PsiFS - file transfer to RISC OS computers

A new freeware file transfer application has been released by Alexander Thoukydides to link Acorn's RISC OS machines to the Series 3 and Series 5. Running on RISC OS 3.1 or greater, it is a filing system that makes the remote machine appear as extra drives on the Acorn. It doesn't do any file conversions, but some of its many features include:



- Intelligent directory cache which tries to read the contents of the remote machine before they are required. This allows filer windows to open almost instantly.
- File date stamps and attributes are preserved, allowing standard RISC OS archiving tools to be used to backup and restore the remote drives.
- Unlike other similar programs, PsiFS monitors changes to files on the remote device and automatically refreshes any open filer windows.
- Serial data can be copied to an attached printer. This allows the remote machine to print via a RISC OS computer without requiring any additional software.

The standard Psion link protocol is used, so there is no extra software to install or run on the remote machine. Both Series 3 and Series 5 versions of the protocol are implemented, including full support for long filenames.

PsiFS is a full filing system, so all normal file operations work as expected. Files can be copied to and from EPOC devices simply by dragging their icons between filer windows. Image filing systems are supported, so archives can be manipulated without first copying to a local hard disk.

homepages.tcp.co.uk/~thouky/tcfp.html

INDUSTRY NEWS

In this regular feature we devote a single page to what's happening in the non-Psion sector of the mobile computer world...

Hewlett Packard has finally released the HP Jornada 820 Handheld PC in the United Kingdom. Sharp has been quick off the mark to offer their contribution and is only the second company to bring a machine supporting Microsoft's latest Handheld PC Pro operating system to the UK. Although both devices have high specifications, they are too bulky to be seriously described as handheld computers and retail in the region of £800.

Hewlett Packard has recently issued a statement announcing an upgrade to both their HP620LX and HP660LX colour Handheld PCs. The forthcoming upgrade will allow the user to update from Windows CE 2.0 to the newer Handheld PC Pro version of the operating system. As well as increasing productivity, the upgrade will also allow those owning the HP620LX to expand their computer's built-in RAM from 16MB to 32MB.

Since Microsoft announced the Windows CE update that allows Palm-size PC colour displays, three companies have been swift to launch devices supporting a 256-colour screen. Hewlett Packard has been the first manufacturer to make use of the update and has released the Jornada 420. Priced at around £400, the Jornada 420 supports wireless information technology. Rivals Compaq have also unveiled their offering—the Aero. This is Compaq's first palmtop computer and the device has similar specifications to the Jornada 420. Casio has also introduced a new colour Palm-size PC. The E-100 will use the Palm-size PC version of Windows CE and is the first device in the Casio range to boast a colour screen. The E-100 is being advertised as a multimedia device that has the ability to browse the Internet.

Other CE-based Palm-size PC manufacturers such as Philips and Everex are expected to follow the lead set by Hewlett Packard, Compaq and Casio and announce new colour devices in the very near future.

Two new Palm devices have been unveiled recently by 3Com. The Palm IIIx and the Palm V both have mono displays but otherwise compete directly with the Palm-sized devices using Windows CE. Latest statistics suggest that 3Com is now a market leader, commanding 72% of the worldwide market for mobile computers.

Users of 3Com's popular PalmPilot and Palm III series will be pleased to know that direct data input can now be undertaken using the new GoType! keyboard. This connects via the serial port of the device, making touch-typing possible.

Finally, six months after unveiling the 9110 Communicator, Nokia have at last launched the product in the United Kingdom. The £350 device is described as a combined telephone and personal organiser and is aimed at the mobile professional. The 9110 has email and web browser functions.

Andy Nott

Shareware Shorts

Steve Litchfield, maintainer of the 3-Lib shareware library, takes a look at the latest additions to the world of Psion shareware...

It can't have escaped your notice that in the last six months there's been a distinct blurring of the boundaries between shareware and commercial software. It seems that virtually every commercial package is available in either restricted form or as a 30-day demonstration version, terms very common for shareware packages.

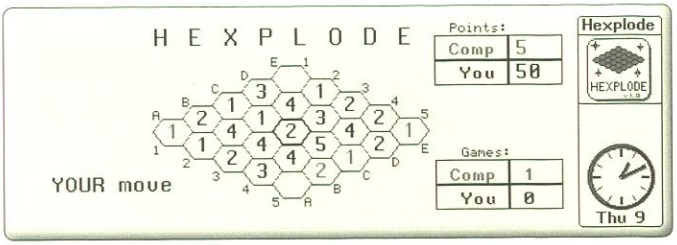
Leaving aside my own personal views on shareware (that it should all be fully working, leaving registration to the user's honesty), this lack of distinction seems to be the way of the future. The old prophetic slogan of the shareware libraries in the late eighties was "One day all software will be sold this way", and though many laughed at the time, it has now all but come true.

So why do we still have a separate 'Shareware Shorts' section in *Palmtop* magazine? It's to do with the quantity and size of the software. Major mainstream shareware packages that have sufficient depth to warrant a full review will get one in 'A Closer Look'. Many others though, perhaps smaller and much more specialist, are more appropriately covered as a single paragraph in this section. It's worth noting that it is extremely rare to find a small and simple commercial application for the reason that it wouldn't be worth marketing—it would be better released as a freeware attraction to bring visitors to the company's web site.

The sheer quantity of freeware and shareware released can be overwhelming. We are usually only able to mention a fraction of the new software released in between issues, at least for the Series 5. A full review of every single application would require an extra 100 pages in the magazine.

Head-to-head gaming in Global Conquest

Mathematical strategy in Hexplode



Gaming on the Series 3

Global Conquest, by **Thomas Wright**, is a shareware, two player game for the Series 3, though with the twist that each player needs a palmtop of their own, linked by serial cable or infrared (assuming a 3c or 3mx). It's a war simulation which puts the might of an army at your fingertips with large maps, animated cursors, intelligent units and an impressive introductory and story and 'video'.

A very old game on other platforms, *Hexplode* is programmed by **Andre van Linden**, with a hexagonal grid for its board, with 25 cells. Each of the players on turn puts a counter in one of the hexagons. Each of the hexagons must contain fewer counters than it has neighbours. When it reaches this maximum amount it (h)explodes, scattering counters to its adjacent neighbours. The number of counters in these neighbouring hexagons will be taken by the exploding hexagon and will increase the score of the current player. The fun comes when you take into account the chain reactions as each neighbour also reaches its critical mass.

Serious SIBO

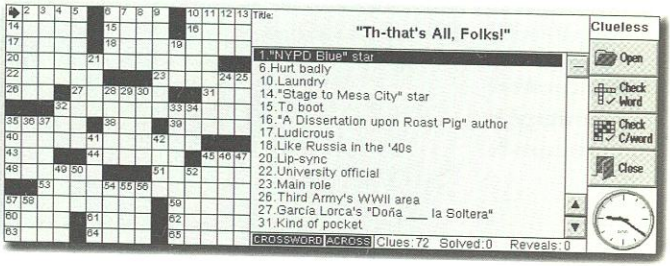
Paul Bowlay makes another appearance in Shareware Shorts with *CodeCalc*, a timecode calculator made specifically for the TV/film industries, but also useful to anyone with a need to calculate elapsed times. Paul is a TV presentation coordinator and thus the utility is slightly biased towards the TV industry, but film calculations are also supported, as it allows calculations based on 24 frames-per-second.

Your Series 3's 'owner' screen should always be relevant to anyone who might find the machine if it's ever lost. For example, a local contact address or number for that country. *UserInfo*, from **Jamie Packer**, aims to make it easy to update your Psion's owner information display as you travel around. The program is simple to use and context sensitive help is available in all menus and dialogs.

One application that simply *had* to be written by *someone* is a millennium countdown clock. There are most certainly others, but I've recently come across *Millennium Clock* by **Mike Panchaud**. This program will display the number of days, hours, minutes and seconds to (or from) almost any date and time as a continuous countdown display. Default values are set for 1st of January 2000. When the magic date has passed, the display then counts upwards.

Siena software

There are still plenty of keen Siena owners out there, usually fairly new to the Psion scene, and at least some of them are programmers. **Janne Jalkanen** has come up with *JBatt*, which wakes up at preset intervals



Solving public domain crosswords in Clueless

(the default is five seconds) and reports the power usage during the last interval, plotting a scrolling graph. You can use this to find badly-behaved programs that eat your precious mAhs, or just use it as a replacement for the system screen 'Battery usage' menu command.

Siena Rail is **Adrian Wymann**'s brainchild, a reference application featuring selected technical information on most of the major motive power on British railways. Locomotives, both diesel and electric, are the main feature, but 'multiple units' have not been forgotten. In addition to the technical data, every individual type of motive power covered is accompanied by a picture illustrating what all the figures and numbers add up to in visual terms. A dedicated Series 3 version is also available.

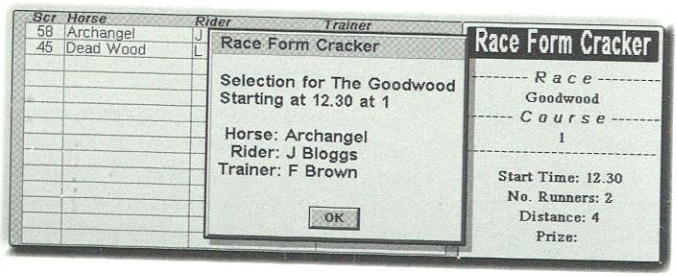
And so to the '5'

Race Form Cracker, from **Roland Waddilove**, is a shareware application designed to help you to identify the racehorse with the best chance of winning. Use it to analyse the huge amount of information available: rider and trainer skills, weight carried, race conditions, horse's age, form and fitness, and so on. Race information can be loaded and saved, any number of horses can be entered and all the information you require is available from the daily newspaper.

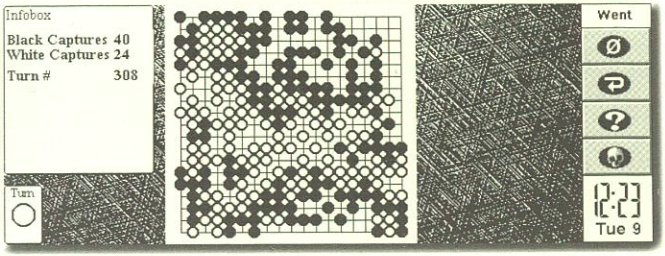
Damien Lewis' nattily-titled *Clueless* is a freeware crossword puzzle engine. It allows you to complete crossword puzzles that are stored in the *AcrossLite* puzzle format, easily obtained from the Internet. Crosswords can be either standard or cryptic.

Tribal logic?

Something else a little different, **Neil Sands**' freeware *Mancala* is an old game of logic for



Race Form Cracker in action



Going, going, gone? Went, in fact!

two players, played on a special board containing 14 holes, the two at the ends being bigger than the others. Stones are collected in the larger holes, in competition with your opponent.

Neuon

Fresh in the wake of **RMR**, **Palmscape** and **Palmtime**, yet another shareware software house has emerged. **Neuon** boasts several ambitious projects (including FTP and ICQ Internet applications), but two of the first to see the light of day are the card games *Pontoon* and *Logjam*, by **Adam Sissman**. The former I'm sure you already know how to play, but the latter is a solitaire game in which groups of three cards of the same suit are removed together from eight piles, until (hopefully) none remain.

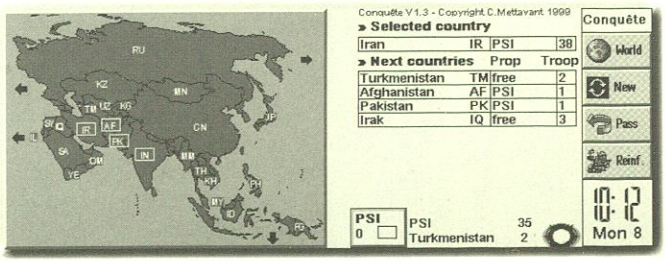
Also from Neuon is *Doodler 2*, a reborn version of the old shareware graphical jotter. It lets you scribble anything you like, wherever you like, across a notebook full of initially-blank pages. Just like a paper notebook, pages can be 'virtually' torn out and binned. Pen width and colour can be set and text strings inserted from the keyboard using the text icon at the bottom of the screen.

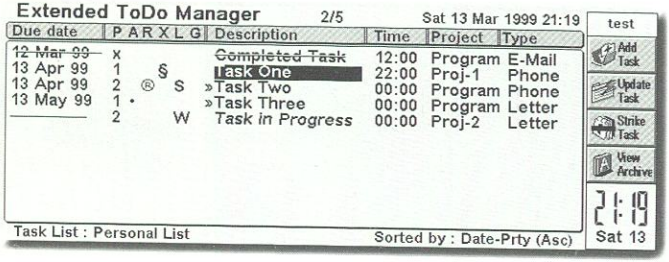
Go, go, go!

Andy 'Eddie' **Berdan** has produced a clever version of the popular strategy game of *Go*, called *Went*. It installs easily, can be configured with or without graphics, and includes some basic 'Go' lessons in the help file.

Conquête (in English or French) is a new freeware project by **Claude Mettavant**, a classical conquest and strategy game where the goal is to conquer the whole planet while eliminating the opponents (much akin to the board game of 'Risk'). Conquête is a fairly faithful clone of the original game, adding sound effects and animated explosions. As your armies spread out, they naturally

Conquer the world in Conquête




Extended ToDo Manager
2/5
Sat 13 Mar 1999 21:19
test
Due date
P A R X L G
Description
Time
Project
Type
12 Mar 99 x ~~Completed Task~~ 12:00 Program E-Mail
13 Apr 99 1 § Task One 22:00 Proj-1 Phone
13 Apr 99 2 ® S »Task Two 00:00 Program Phone
13 May 99 1 • »Task Three 00:00 Program Letter
2 W Task in Progress 00:00 Proj-2 Letter
Add Task
Update Task
Strike Task
View Archive
21:19
Sat 13
Task List : Personal List
Sorted by : Date-Prty (Asc)

Extensive task management in RMRTask

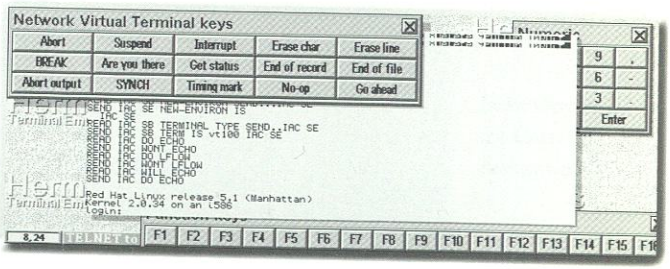
become thinned out and less effective and eventually you decide to 'pass' your turn to the next player (Psion or human), who's also trying to dominate their continent. At some point, of course, players will come into contact with each other and it's at that point that the play starts to really hot up. Reinforcements are brought along on each turn, according to the number of territories you own.

Command and Conquer

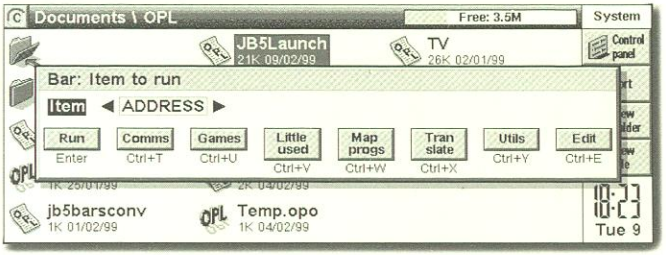
Palmscape's shareware *Imperium* is a scaled-down clone of the ever-popular 'Command and Conquer' on the PC. A real-time wargame, in which you have to build up your base, construct units and attack the enemy. The goal in Imperium is to capture strategic buildings and eventually destroy the enemy base. It comes in two versions: the full game, with construction facilities and a greater requirement for strategy, and the instant-access 'Conquest' in which you can concentrate on learning the interface and attacking the enemy.

Things to do

RMR Software's latest is version 1.4 of their 'extended to-do manager', *RMRTask*, available in six different languages. It provides an alternative method of recording and managing tasks (or To-Dos, 'W3s' [who, what, when], action items, etc.) that have to be accomplished, whether at work, at home, for hobbies or for personal goals. It uses the principles of good time management: breaking down large projects into tasks of manageable size, categorising and setting priorities for tasks, sorting and ordering them, and being able to see progress, results and accomplishments. RMRTask allows sub-prioritisation of tasks and by categorising on three levels (Groups, Projects and Types) quickly allows you to see lists of outstanding items and to organise your tasks for optimum time management.



The fabulously comprehensive terminal system—Hermes



JB5Launch—categorise your applications

Flying by IrDA

Addressing some of the problems with the built-in COMMS application, *FlyTERM* by **John Read** is a shareware terminal emulator that supports all the important VT100/ANSI escape sequences and is optimised with large input buffers for the wireless (i.e. infrared) user. Installation requires Psion's Message Suite 1.52 or above.

Richard Panton's *Hermes* terminal emulation and communications system has been massively upgraded to include support for the 'Telnet' protocol over a standard Message Suite Internet connection. Function keys, a numeric keypad, and NVT (Network Virtual Terminal) keypad are all supplied. Multiple emulations are possible, with VT100/ANSI and dumb/network being supplied as standard.

Making contact

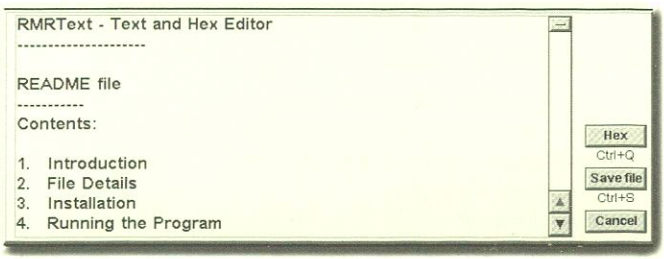
Just as on the Series 3 range, Series 5 contact managers seem to be flying in thick and fast. Here are two more, both freeware. **Ian Leak's** *Empower* organises your data by Companies, People, Tasks and Expenses, with each category of information displayed on its own tab page. **Ivo Pastyrik**'s *IPContact* is a 'relational' phonebook manager for EPOC systems, letting you maintain your database, associating multiple individuals with one company.

New utilities

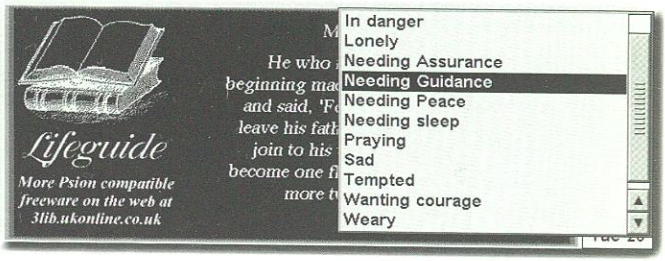
Mark O'Neill's *5Talk* is a talking clock for the Series 5 that can be activated even when your machine is switched off (via the external recording buttons) or set to work automatically when your machine is turned on again.

Marker, from HotKeys author **Henry Hirst** is a simple freeware utility to make system navigation easier. Create up to 255 additional

Simple text editing in RMRText



A Bible verse for every occasion in Lifeguide



bookmarks for your folders, accessible from a configurable system-wide hotkey.

John Boyce's latest is *JB5Launch*, a utility that helps to launch pre-selected applications, documents and OPO files easily and quickly. It is designed to keep the Extras bar clear of programs that aren't in everyday use.

RMR pop up again with *RMRText*. This is a packaged plain text editor that patches EPOC to associate files ending in '.txt' with RMRText, launching it when the file is tapped on.

Hic!

Vins is a shareware wine and wine cellar manager, running in English and French, by **Jean-Philippe Pasquier**. It's heavily skewed towards french vineyards, but does include 550 appellations, a database of quality/years for each region and a database of appropriate foods and wines. Registered users also get to add their own entries to the system, building up a personalised wine cellar.

On a personal note

Piano 2.7 is a major upgrade to my own shareware musician's aid, adding support for tune recording and playback and for older (baroque) instruments. *Lifeguide* is a free Bible-based guide to life, with appropriate scripture verses displayed for different situations and emotions in your life. Available in English and French. *UK Pocket Directory* is also now freeware and stands at version 2.6. The application offers a 'yellow pages' directory of UK attractions and services.

Software availability

All of the software reviewed in Shareware Shorts will be available from CD07 onwards and can also be downloaded from the Internet.

An easy way to find the software you are looking for on the Internet is to go to the 'Programmer directory' on *www.palmtop.co.uk/authors.htm* and look up the name of the author as highlighted in **bold** in Shareware Shorts. This will take you to the author's own web site, from where you can find out more about the product and download it directly.

What is shareware?

Written by professional programmers and enthusiasts to meet specific (and sometimes unusual) needs, shareware is often supplied for use on a thirty day trial basis. If you like the software you are then asked to send a payment to the author. Some programs are freeware and don't require any payment at all. Each program comes complete with information about how to install and use it, and how to pay for it.

Where can I find it?

One way to get any of these programs is from the Internet. If you've got access to the web there are several on-line indices which link directly to the relevant author download page concerned. Most mainstream programs (excluding games and small utilities) appear in the comprehensive Palmtop Software Directory on our web site. This is an online listing with each entry having a hyperlink directly to the program author.

Things are actually even easier if you haven't got Internet access. As long as the program concerned has been out for a month or so, you should find a copy on the latest edition of the Palmtop CD-ROM, indexed into the appropriate category.

How do I use it?

Once you've found the file you want, there are three steps to take:

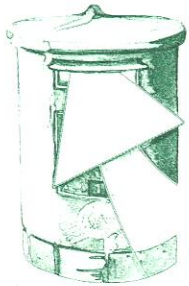
1. Decompress the files if necessary. If you're new to computers you may not be familiar with compression. Psion applications normally have more than one component (e.g. the program itself, help files and pictures). These are normally compressed into one file, which makes them easier to distribute. Shareware on the Internet is most commonly compressed in 'Zip' format, and you can recognise these by the '.ZIP' at the end of the filename. Before you can install and run the program you need to extract these files with an 'unzip' program, which is freely available from your shareware supplier. If you use DOS, look for PKUNZIP, Windows users can use Winzip, and Mac users should try ZipIt or the commercial Stuffit Deluxe. You can also unzip files on your Psion without using another computer, using either PsiZip (Series 3, Siena and Series 5) or RMRZip for the Series 5.

2. Copy the files. You'll probably now need to transfer the unzipped files onto your Psion. To do this you'll need some external hardware, such as the PsiWin link cable or a Cyclone drive. Normally one of the unzipped software files is a text file (e.g. README.TXT), which can be read by any word processor. It explains how the program should be installed and where the files need to be copied to on your Psion. Series 5 owners should also look out for any special SIS files, which can be double-clicked on for really easy installation.

   See 'The Installation Game' in issues 14/15 for a more comprehensive discussion of the above procedures and 'Installing software - the easy way' in issue 21.

3. Install the application. From your Series 3 or Siena System screen, select [Psion]-[I]. If the program was copied correctly the filename should appear in the list. Select it, press [Enter], and the icon should be installed, ready to run. Series 5 users don't need to do this as the newly installed program will automatically appear on the Extras bar.

Mail box



Contribute and WIN PRIZES! The Star Letter in each issue wins the author a FREE copy of STREET PLANNER or other Psion goodies from our special collection. Prizes are valued at up to £70 each!

Lean and mean

I don't usually have an emotional response to articles in *Palmtop*, but the one entitled 'EPOC in the RAW' by Roger Pemburton (in issue 20) made me worry. I was worried because I knew as I read the article that 99% of what Roger had to say was very close to the truth.

Since last November, in a effort to become organised using my Psion 5, I had purchased and then finally discarded the following:

- 3 x PIMs/project managers
- 2 x list/jotter applications
- 1 x application/document organiser

I had not faced up to the *real* issue until reading Roger's article. This was that I needed my own strategy/method for organising my life *first*—then I had to find an application that would meet my requirements. What I found was that the built-in applications on the Series 5 were more than adequate once I had worked out how I wanted to organise things.

Now I am better organised, more efficient and, yes, I now have more memory for my data, which is what a PDA is really about.

Bhagiyash Shah
Sandhurst, Berkshire

Star Letter

Back up NOW!

Like many other Psion users, including Brian Price (issue 22), I'm getting tired of people whinging about having lost the data stored on their palmtop computer, often due to acts such as spilling of a bottle of wine on it (in the case of a TV critic, reference to a programme about food and drink, when asked about their opinion of the possible advantages/disadvantages of using a PDA). If, as a palmtop computer user, you do *not* save data to an external source then you only have yourself to blame—END OF STORY.

I learnt this lesson the hard way, not once but *twice*. I first started using a Series 3 in the spring of 1995, and was so happy to have a little marvel that could store oodles of information—until the day the batteries were drained when I overrode the auto shutdown. Disaster struck again when I dropped the machine from the workbench while at work.

The second time was especially embarrassing as I had just finished writing a program in OPL for use at work, and had to confess to our managing director that I had lost everything—having failed to do a backup.

The moral of this tale is that if you won't take advice from those who have been in the position of having lost important data, prepare yourself for eventual disaster...

Stewart Sear
Sevenoaks, Kent

Small marvels

Psion could clear up as far the palmtop computer market is concerned. I opened my Series 5 on the train one day, and a friend mocked me for having a £450 "organiser". I then demonstrated that it had a full word processor, spreadsheet and powerful database. I demonstrated some sound samples and showed the auto-dialling feature that all Series 3 owners have been amazing people with for years.

First I noticed my friend's raised eyebrow, then he broke into a grin. I then demonstrated Palmtop BV's Route Planner, zoomed into his home town and plugged in my Garmin GPS. It took about 30 seconds to get sufficient satellite reception (quite a challenge on a train), and by the time he realised that the moving cross-hair on the screen was *us*, he began to shake erratically, clearly amazed by it all.

I then showed him some of the faxes I had recently received on the Psion, then checked my email account using an Ericsson GH688 and DI27 clip-on modem. I almost had to administer a paper bag.

This demonstration took about 10 minutes, and I only covered a fraction of what can be achieved using this pocketable equipment and a couple of AA batteries.

Sure—you can buy colour machines for a little more money, and get four hours use of battery life. But what happens when you run out of power in the desert, or try a find a mains socket on a train or on your hang glider. Or try to justify text, print preview, etc. I took my Psion on a trip up Mount Snowdon last weekend and faxed a friend from the summit. Impressive machines—I think so.

Richard Compton
Kirby Cross, Essex

Improve those manuals

This is a plea to third party commercial Psion software producers to produce manuals that are clearly laid out, with appropriate use of bullet points, emphasised text and screen shots. I have found much of the software available for Psions to be satisfying to use, *despite* frustrating attempts to navigate through poor documentation.

Tony Bingham
Higher Crumpsall, Manchester

As time passes, the quality of computer documentation seems to *decrease*. Psion's own manuals are becoming slimmer and less comprehensive, many software manufacturers offer horribly substandard and brief documentation, and some companies even have the nerve to omit printed manuals

entirely, requiring the user to print out endless pages from a PDF or plain text file (see Pete Sipple's comments on page 106 of issue 22 for more discussion on manuals).

Surely it's time for computer users to protest against this insidious trend, and campaign for decent manuals to be included for our money? - Ed.

There's a hole in my Psion

While she was reading in bed one night, my wife decided that the glow from the nearby table lamp was too bright. To shade her delicate eyes she decided to place my cherished Series 5 *on top* of the bedside lamp.

After several minutes she smelt a rather unpleasant burning smell, revealing my precious Series 5 with a huge burn hole in the bottom—I can now see right through to the printed circuit board within.

When I retired to bed she informed me of her little "accident". A short while later, after I had peeled myself off the bedroom ceiling, I did a little investigation. To my surprise it still functioned—even the CompactFlash card was intact. The only problem I have been able to find is that the pointer will no longer come out of its holder. I leapt around the room with joy.

I have now been able to back up all my valuable data and have just two problems: a big hole in the bottom of my beloved computer and the search for a new wife.

Mark Whiskin
Higham, Kent

CE hell?

As a recent escapee from Windows CE, I feel I must rant about the totally different (and impressive) experience I have had over the past month using a Psion Series 5. I feel as if I have escaped from a prison and now I want to tell the world what life was like on the 'inside', and why any waverers should not hesitate or be afraid to move over to an EPOC machine.

I originally bought a *Philips Velo 1 HPC* (instead of my second choice, the Psion 5), essentially because the sales assistant talked me into it. Obviously they were trying to shift these machines, which is their job, because a new model (the Velo 500) was being shipped soon—something they didn't tell me about at the time, of course. Instead the assistant told me about the built-in modem, the Windows CE operating system, fast processor, free upgrade to Windows CE 2, free extra RAM, the look and feel of the machine and its guaranteed compatibility with my Windows PC at home. It was also cheaper than the Psion machine.

I sort of lusted after the chic, cleverly designed Series 5, but was made to feel that Windows was safer, more compatible and better supported. After 13 months, my Velo died of a broken hinge and a flickering backlight. It also crashed frequently for no apparent reason, resulting in lost data and hours of work trying to get it going again. There were multiple problems synchronising, and I couldn't use the Internet with the machine attached to my PC because it messed up my modem port—restarting my PC was the only way.

Internet surfing on the Velo was slow and disappointing and only worked from home, which defeated the very objective. No-one in Technical Support nor the Velo User Group could help me with this. All credit to Philips for giving me a new machine so that I could sell it and give the proceeds to Psion. (The hinge on a Velo 1 is guar-

anteed for two years, the rest of the machine is guaranteed for *one* year. Does that tell you something?)

Dixons, who sold me my Psion 5, were very shaky in their understanding of the machine. They didn't know if it was compatible with Outlook 97 or 98, or Access 97. They didn't guarantee that it would synchronise or share files with my PC. They had nothing impressive to say about EPOC, nor the keyboard or the processor speed, etc. Obviously, they had not used the machine.

Does Psion, when they distribute their computers, send crib sheets with them to give sales assistants the facts? If not, I think they need to. These machines are being under-sold by huge computer retailers because they haven't taken the time to find out what they can do. Luckily, I had done my research, used a 'virtual' Psion on the net, tried to find problem pages and found none full of angry, frustrated users (unlike the Philips Velo user group site, which was taken off the net due to its bolshiness). I knew that the Psion 5 could not have survived this long without such compatibility issues having been sorted.

And now the *real* rant. The Psion 5 knocks the rubberised coating off the Velo, even when I upgraded the Velo to 12MB running CE 2. The Series 5 operates faster, has more free RAM for its programs, can have multiple applications running without an overloaded task bar or running out of memory, synchronises without problems and is faster, more automated and more intelligent in this task and upgrades its backup files rather than starting from scratch each time (as the CE 2 synchroniser does).

The screen is clearer and easily zoomed, the keyboard is a joy, the stylus well-balanced, the unit is smaller and lighter, the batteries last longer, the memory and other accessories are generally cheaper, Internet support is superior, shareware and freeware abound, the unit does not topple over when the screen is tapped, all of the programs are more functional and broad in their application, you can actually *work* with the archives and interrogate the machine remotely, and you can customise it to your heart's content.

I am *free* from Windows CE and I would recommend to anyone who is wavering, thinking of digging that tunnel or jumping the barbed wire—invest in this fantastic product. It is 100% compatible with your PC, it does not crash when you give it too much to do, you can type on it, it synchronises at high speed by default and without a problem, it is a proper handheld computer with fully-fledged applications and it is supported and mature.

Windows CE will never mature because Microsoft is driven by 'No.1/type B' 'techies' (see Pete Sipple's 'Musings' on p106 of issue 22), whose job it is to upgrade, to move on and abandon you with an out-of-date operating system. The extensive Psion community and *Palmtop*'s support will stand you in good stead no matter what machine you have or whatever the future holds for the EPOC operating system.

Break the Windows and step out into the sunshine. You won't regret it.

Simon Stone
Leeds

A Closer Look...

...at some of the newest and most interesting products available for your Series 3 or Series 5

Star Ratings:

★★★★★ Excellent
★★★★☆ Good
★★★☆☆ Average
★★☆☆☆ Fair
★☆☆☆☆ Poor
☆☆☆☆☆ Dismal

Interpreting reviews

Quality: the *Quality* star rating reflects how well the product works, whether it includes all the features you'd expect, whether the interface is consistent and easy to use, and in data-based products it also reflects the quality of the information contained in the program.

Value: the *Value* star rating reflects the value for money of the product, taken within the context of what the program (or other product) does. Therefore a simple utility program will be rated differently to a sophisticated application at the same price.

Siemens Pocket Reader — Page 25
Palm-Tec MBC — Page 28
Series 5 docking station — Page 30
Using your Series 5 / 3-Lib training CD — Page 31
Wages — Page 34
ChemTools — Page 36
CoDriver — Page 39

Siemens Pocket Reader

Typing in text from a printed page is both tedious and an unnecessary duplication of effort. Anyone who has had to retype someone else's report or re-enter printed data has surely reflected that there *must* be an easier way?

Optical Character Recognition (OCR) for desktop computers has been with us for some time now, and allows the text from a sheet of paper to be 'read' in a single pass by a flatbed or handheld scanner. The text of the document is then converted into a word processor format that can be opened and edited directly from your PC. Results vary from excellent to abysmal, depending on the quality of the original text and the sophistication of the OCR software, but given an original document of decent quality it's not unreasonable to expect at least 95% accuracy in character recognition. Final polishing of the document sometimes involves changing '0's to 'o's, 'l's to 'i's and so on, but this is still much faster than entering the entire text from scratch.

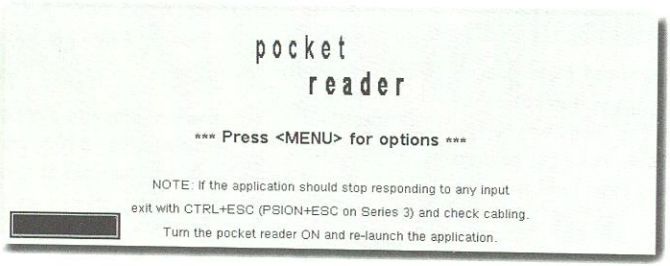
Psion users can now enjoy similar time-saving benefits with Siemens' new *Pocket Reader*. This neat little hand-held device is the only OCR reader to work with Psion computers (both Series 3 and Series 5) and one of only a few that are both portable and don't require mains power.

Shaped like a very chunky pen, the Pocket Reader weighs a comfortable 110g and measures 160 x 40 x 20mm (about as long as a Series 5).

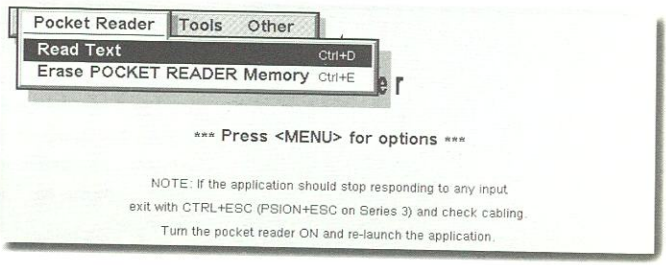
Operating the Reader is simplicity itself. Switch it on and the built-in LCD display springs into life, showing the remaining battery life and the amount of internal storage space available. On a normal set of batteries, you get around 20 hours of use and can store around 20 standard A4 pages of text. If you remove the batteries your data will remain intact, thanks to the non-volatile storage employed.

Text scanning is accomplished by pushing the tip of the device against the text on the paper. As soon the rubber roller on the end of the Reader makes contact, the scanner activates and you can 'roll' along the page, following the lines of text one at a time. Lifting the Reader from the paper stops the process and the last 24 characters of the scanned text pop up instantly in the display to confirm a successful scan. If a line doesn't scan as well as you hoped, just scroll back, delete it, and scan again. With a steady hand and a flat surface I was able to get very accurate results virtually from the outset. The trick is to keep the scanner at a right angle to the paper and to keep rolling in a straight line. With a little practice the results are very impressive.

The scanner's resolution is 400 dots per inch and it can cope with fonts from 2.8-5.6mm high. According to the documentation, it can


pocket
reader
*** Press <MENU> for options ***
NOTE: If the application should stop responding to any input
exit with CTRL+ESC (PSION+ESC on Series 3) and check cabling.
Turn the pocket reader ON and re-launch the application.

Downloading text

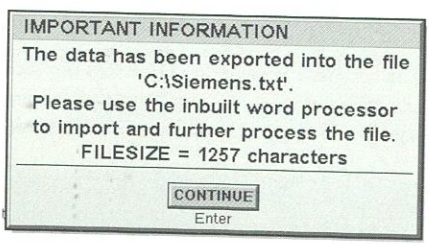

Pocket Reader
Tools
Other
Read Text Ctrl+D
Erase POCKET READER Memory Ctrl+E
*** Press <MENU> for options ***
NOTE: If the application should stop responding to any input
exit with CTRL+ESC (PSION+ESC on Series 3) and check cabling.
Turn the pocket reader ON and re-launch the application.

About to grab some text

recognise both Serif (Times, Courier, etc.) and Sans Serif (Helvetica, Geneva, etc.) type styles, so should cope with all but scripted and decorative text.

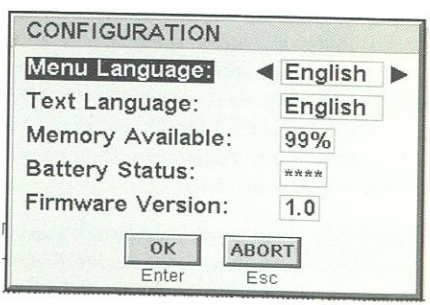
In practice, italicised text sometimes presented something of a problem too, but using the supplied ruler as a guide, and with a slower pass of the scanner, satisfactory results are possible.

Once the text is scanned in, the data must then be transferred onto your Psion. The Pocket Reader comes with a connection lead terminated with a 9 pin RS232 (serial) plug.


IMPORTANT INFORMATION
The data has been exported into the file 'C:\Siemens.txt'.
Please use the inbuilt word processor to import and further process the file.
FILESIZE = 1257 characters
CONTINUE
Enter

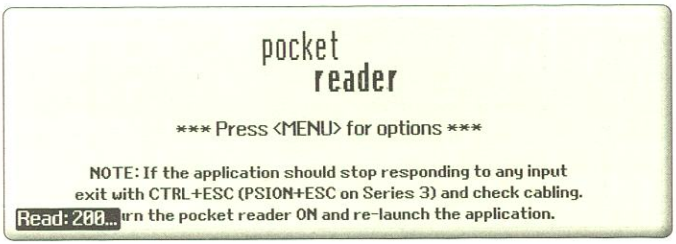
Download complete

To make this physically connect to your 9-pin PsiWin lead you will need either *two* 9/25 way adaptors and a 25/25-way *null modem adaptor*, or one 9/25 way adaptor and a 9/25-way *null modem adaptor* (not supplied). Note that not every null modem adaptor works with this product—I successfully tried Psion's and Widget's, but my RS Components device didn't work (see issue 18, page 70 for more on null modem adaptors). The resulting multi-lead/connector ensemble isn't very elegant, and is quite bulky to carry around.



Configuring the reader

The software running on a Series 3


pocket
reader
*** Press <MENU> for options ***
NOTE: If the application should stop responding to any input
exit with CTRL+ESC (PSION+ESC on Series 3) and check cabling.
Read: 200...
rn the pocket reader ON and re-launch the application.

Note that the Pocket Reader is also designed for use with a PC and by default comes with software for Microsoft Windows only, but the additional software for your Psion can be downloaded from the PocketReader web site.

We tested both Series 3 and Series 5 software. For both machines, the text copied over without any trouble, always being dumped straight into the internal drive's root folder. On a Series 5, the file gets named as 'siemens.txt'. If your Series 5 has the latest version of Message Suite installed then tapping on the text file will open it up for instant viewing in WORD, ready for editing, copying and printing. If you don't have Message Suite, simply import manually into WORD.

On a Series 3, the file is created directly in WORD format, as 'siemens.wrd'. It seems that the filename and location can't be altered, at least in the current version of the software. On both machines the raw text is perfectly readable, and though lacking in formatting is easy to manipulate.

Overall, this is an impressive little product that is surprisingly accurate and therefore hard to fault. The interface of the Psion-based software is the only weak side, with the multiple adaptors and rather minimalistic software, but it gets the job done and can ultimately save you stacks of retyping.

The Pocket Reader comes with instruction manual, software and batteries, and can be configured to work in English, German, French, Spanish or Italian.

Pete Sipple

Copyright warning!

Don't forget that you shouldn't generally copy material from books, magazines or material belonging to others, as this would infringe their copyright, even if the material is purely for your own personal use.

Siemens Pocket Reader

From: Major Psion dealers

Availability: now (English/German/French/Spanish/Italian)

Runs on: Series 3/Series 5/PC

Psion Software: from *www.pocketreader.com*

Price: £129.95 including VAT

Quality	★★★★☆
Value	★★★☆☆

For *Palmtop* readers the Pocket Reader is currently on special offer from Clove Technology at £116.00 inc. VAT, together with the Psion software on floppy disk. Please quote *Palmtop* when ordering.

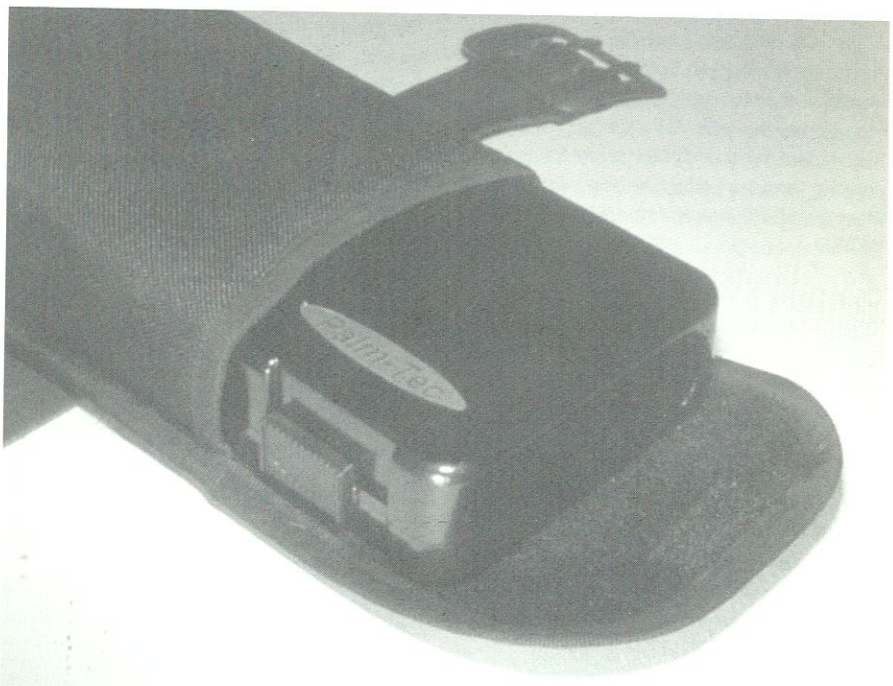
Palm-Tec MBC

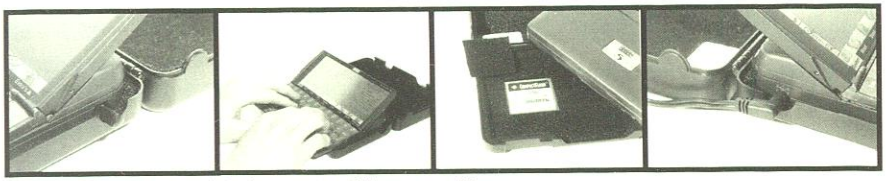
It's not often that one can claim a case has changed the way a palmtop is used, but that's what the *MBC* ('Mini BriefCase') has done for me over the last four months.

Perhaps it can't take *all* the credit for the change, as I'd already realised that the Series 5 was just a little too large to carry on my person 24 hours a day and had stopped trying to carry it with me everywhere in a belt case. Relegated ever so slightly, from being a second brain to the role of "palmtop computer that thinks it's a laptop", and transported in the briefcase or holdall, the actual dimensions of the Series 5's carrying case are far less critical.

The next logical step was to reason that if size was no longer the biggest factor in choosing a case, why not go for one offering the best protection? Which of course is where the MBC comes in, with its tough ABS plastic shell. Two chunky ribbed catches hold the case closed and there's a metal hinge at the back. Palm-Tec claim the case itself is virtually indestructible.

Inside the case is a lining of foam with a dual function, holding the palmtop in place away from the rigid plastic walls and providing a bit of extra impact absorption in the event of an accident. Despite this protection, neither Palm-Tec nor ourselves recommend dropping your Psion while inside the case, even in the interests of case research!





Photographs reproduced with kind permission of Maarten van Maanen

Opened up, and with a Series 5 in situ, cutouts at the back (just) allow access to power sockets and stylus, with the front being cleverly designed to allow the sliding keyboard to clear the case edge.

It is this ability to work without removing the Psion that enables the MBC to live up to its name and the user to change the way they work. All of a sudden, the MBC becomes the Series 5's *home*, only being taken out to do backups or PsiWin transfers. With the 5's IrDA port being flexible enough to work even when half of its surface is obscured by the hinge, wireless connections to GSM phones are possible inside the case. The opened-up foam-padded case top even forms a comfortable place to rest the phone while connected to the Internet.

Two recesses in the foam bottom take spare CF cards, a nice touch, an idea I'd like to see extended to storage for business cards, emergency money, etc. in the case roof. The standard black finish is smart enough, but Palm-Tec have recently announced a range of other attractive finishes, including metallic dark green, deep blue, and charcoal grey. And for those who like something a little different there is also a 'soft feel' rubberised black version.

The Palm-Tec case almost doubles the thickness of your '5' and adds an extra 150g in weight, but in return it offers excellent protection and may well open up situations where you can leave the standard briefcase at home, using just the MBC instead.

Palm-Tec also offer a Cordura belt case to house the MBC, although given the resultant dimensions this makes for a very bulky combination on the waist. For most users, the MBC will be of greatest benefit at the bottom of a rucksack or mingling with day-to-day detritus in a briefcase.

The MBC case can also be used to house a Series 3 machine, though the cutouts for the pen and mains adaptor become redundant.

Steve Litchfield

Palm-Tec MBC

From: Palm-Tec - tel: +44 (0)1926 470615

Availability: now

Compatible with: Series 5 / Series 3

Price: £24.95 in black, including VAT and UK postage (colour versions at extra cost), £7.95 for cordura holster.

Quality	★★★★½
Value	★★★★☆

Series 5 docking station

Some of the other palmtop computers on the market (e.g. the PalmPilot), can be attached to a docking station—a cradle that the unit can be dropped into to make a quick connection to a PC or power supply. Now, thanks to this new product, you can 'dock' your Series 5 too.

Designed and developed by POD Ltd, this light plastic cradle sits on a desk and holds your Psion securely. Just ensure that the serial port 'door' at the back of the Series 5 is pushed open before engaging with the stand and your link cable will click directly into place, ready to communicate with a PC.

Putting it to the test, a Series 5 does indeed slide snugly into place. And although I was initially sceptical whether the serial lead would connect correctly, it clicked home successfully every time. There is a cutout at the left of the cradle to allow a mains adaptor to be plugged in, and a small hole to hold your stylus upright—a nice touch. Note that once docked, you do lose access to your infrared port, stylus slot and SSD drive door.

The only criticism is that when pressing the spacebar the lower half of the keyboard tends to flex downwards slightly more than when the Series 5 is freestanding, by virtue of the way the docking station clamps the machine in place.

Eight small rubber feet are designed to prevent the whole from sliding around your desk, though they barely demonstrate more friction than a free-standing machine.

Personally, this kind of product is not something I would purchase, and at almost £30 I'm most certainly not alone. It would have been nice if the unit had included its own built-in cable, thus leaving your existing PsiWin lead to be used for other purposes.

However, if you are tired of constantly plugging/unplugging your PsiWin cable, this might make your life a little easier.

Pete Sipple

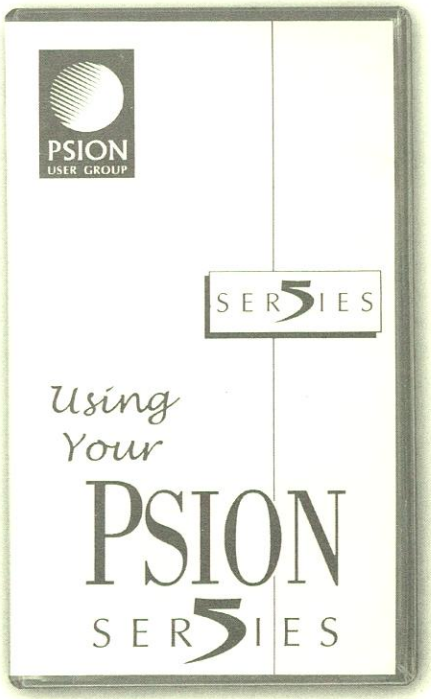
Series 5 docking station

From: Clove Technology - tel: 01202 302796
Availability: now
Compatible with: Series 5
Price: £29.95 including VAT

Quality	★★★☆☆
Value	★★★☆☆

The 3-Lib Training CD

Before going too far into this joint review, let me start by stating that many of you will never need either of these training products. By the very act of reading *Palmtop* magazine you are immersing yourself in tutorials, hints and tips which are easily the equal of most of the material on offer here. Many readers will also have (at the very least) a basic confidence in navigating their palmtop. The '*Using your Psion Series 5*' video and '*The 3-Lib Training CD*' are aimed at the beginner and relative beginner respectively. Where the two products score over the printed page, of course, is in the use of sound and animation to add an extra dimension to the learning experience.



The User Group's video arrives in their standard yellow packaging and is a standard VHS-format tape of just over an hour. Split almost equally between each of the Series 5's built-in applications, each section is based around a camera's eye view of a PC monitor running the EPOC emulator. Although the resolution is quite poor (especially on my 14" TV screen), a clever zooming system is used to display small portions of the screen much more clearly, as and when the need arises in the narrative. Starting with simple footage of someone opening the box and sorting through the enclosures, the tasks demonstrated on screen are kept to the level of "Now we tap on the right hand side of the screen to create a new entry", but for the absolute beginner this is fine. This basic overview of the '5' would also be of interest to the Series 3 owner wondering whether to trade up and wanting an animated glimpse into EPOC territory, as there are numerous references in the video to the differences and similarities to the Series 3.

For much of the tape, the applications are demonstrated without much imagination, with little forethought having been apparently given to what was to be shown. On numerous occasions, the video captures the user's pointer making mistakes or looking in the wrong menu card, and possibly because of this the accompanying audio commentary is slightly hesitant in places (I timed one silent pause at 15 seconds). The soundtrack had very obviously been added later on and the narrator probably wasn't entirely sure what the video demonstration was going to show next.

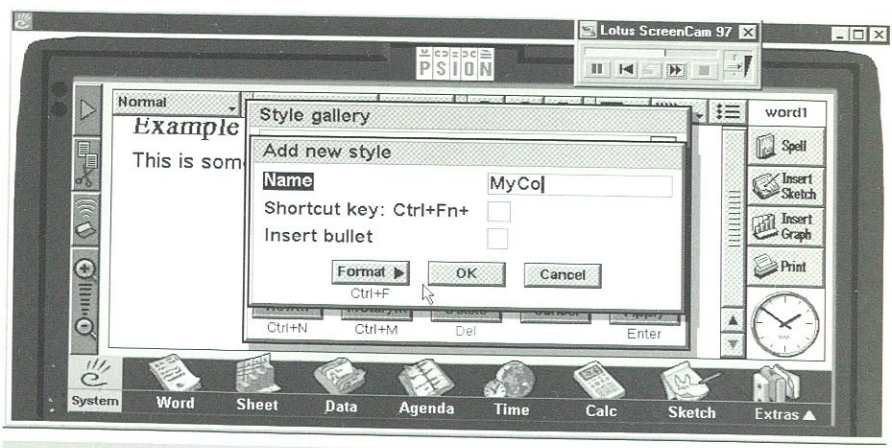
Some of these problems also afflict 'The 3-Lib Training CD', although I suspect for more technical reasons. The CD is a collection of 50 or so 'movies' of between two and eight minutes in length, each 'filmed' using *Lotus ScreenCam*. This is a PC-only system that captures the screen display in real-time, complete with mouse movements, along with an audio commentary that describes what's happening. The system worked acceptably on my Pentium 266, although there were small synchronisation errors of up to a second between the screen and sound tracks of some movies. The product's web-like interface includes a good trouble-shooting guide, which assured me that small timing delays are inevitable and dependent on the vagaries of Windows and the PC's specification.

Aimed at people with a fair understanding of the Psion 5's basic functions but wishing to go further, 'The 3-Lib Training CD' includes such topics as 'Converting documents and images to work on the Series 5', 'Getting the most out of Message Suite' and 'Installing shareware using PsiWin'. There are also good

A typical ScreenCam movie control panel

(though basic) tutorials for WORD (covering styles and templates), SKETCH, SHEET and OPL—nothing earth-shattering here, but a useful learning aid for the beginner. The commentary is plentiful and machine-gun quick, especially compared to the laid back approach on the User Group video, and I suspect much use will be made of the ScreenCam pause and rewind controls.

Despite containing over two hours of 'video', I was a little disappointed to note that there's still room on the CD for another five (if you discount the duplicates of each movie in Windows 3.1-compatible form). In their documentation, 3-Lib promise more content over the coming months, driven by requests from their customers.



Halfway through one of the WORD tutorials

Apart from the occasional technical glitches with soundtrack timing and volume, the CD's weakness is that it requires the student to have access to a reasonably fast multimedia PC and to want to learn while staring at a computer monitor. In contrast, the hardware requirements (domestic TV, video player) and the informality of the User Group video are a major plus point for *their* intended audience, for whom the living room sofa is a more comfortable location.

Both training products seem relatively 'raw', with plenty of room for improvement. But at least they exist, are available now and will help novices appreciate the power of the Series 5.

Paul Nelson

Using your Psion Series 5

From: The User Group - tel: 01752 781818

Availability: now

Requires: VHS video recorder

Price: £29.50+£3 UK p&p (including VAT)

Quality ★★★☆☆

Value ★★½☆☆

The 3-Lib Training CD

From: 3-Lib - tel: 0118 9265081

Availability: now

Requires: PC running Windows 3.1 or higher

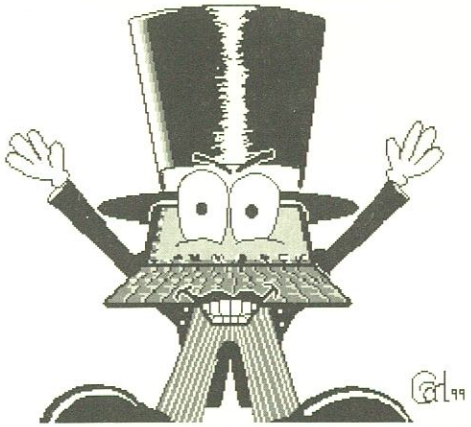
Price: £26 including worldwide postage

Quality ★★★☆☆

Value ★★★☆☆

Psion ART

Created by Carl Reader using Series 5 SKETCH



Wages

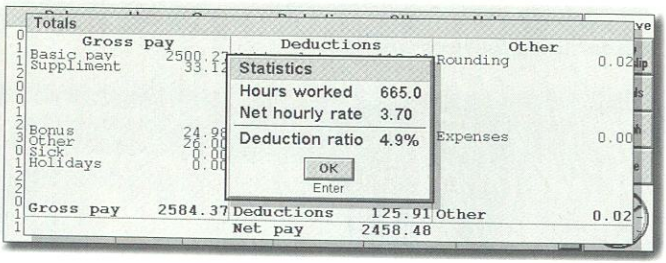
Just a few weeks ago, I received my Self-Assessment tax form from the Inland Revenue. Like many of *Palmtop*'s readers, the arrival of this document means that it's time to dig out copies of receipts, expenses forms, bank statements and other official papers. If you receive a regular income from an employer, Richard Smedley's shareware program *Wages* is worth a look.

The premise is simple. When you receive your pay slip, you tap the details into Wages. You can create your own custom fields for credits, deductions and non-taxable items—up to 14 for each category, which should be enough for almost anyone. Details such as basic salary, bonuses, tax and National Insurance deductions, pension and health scheme contributions can all be logged into the program.

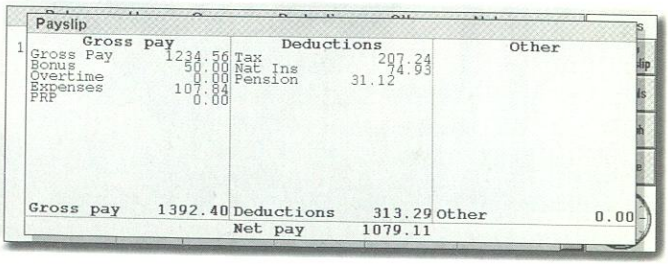
After a few pay slips have been entered, you can build up a pretty good picture of how much tax you've been paying, how much your company has been putting into a pension scheme, or what percentage of your salary is going to somewhere other than your bank account. If you have regular deductions of a fixed amount, such as union fees, then you can enter them via the 'Common entries' option and they will be deducted each time you enter a new pay slip.

As well as helping out with tax returns, you can also keep track of your total number of working hours (and therefore your average hourly rate).

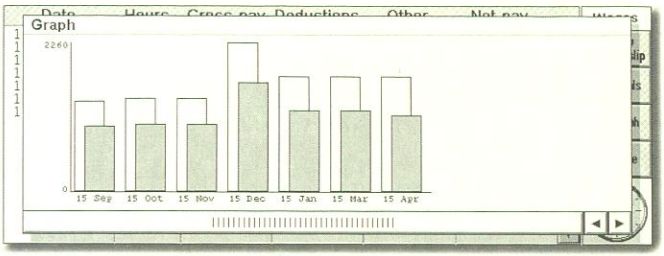
The program has some nice touches, the most impressive being a 'graph' facility. Tapping on the appropriate toolbar button brings up a graphical display of pay slips for a specified date range, such as the current tax year. It's likely that you'll want to keep details of your income private, and optional password protection has thoughtfully been incorporated.



Checking out your totals



Entering your pay slip details into Wages



Gross and Net pay slips

Although the idea of a program to log your payslips doesn't sound too exciting or inspiring, this software is flexible enough to have other uses, e.g. logging expenses or overtime. Moreover, its 'Open/Save' options mean that more than one user or account can be set up.

The unregistered shareware version only allows for a limited number of payslips to be entered (the exact number isn't specified in the documentation). Registration also removes the nag screen that appears when the program starts up.

With full printer support and comprehensive on-line help, this is a flexible and well-implemented piece of software. Though all of these functions can be quite simply achieved with a little work in SHEET, wages offers a friendly interface and a gentle helping hand.

Pete Sipple

Wages

From: usual shareware sources (by Richard Smedley - *www.cix.co.uk/~rsmedley/Series 5/*)

Availability: now (English)

Runs on: Series 5

Price: £10

Quality	★★★½☆
Value	★★★½☆

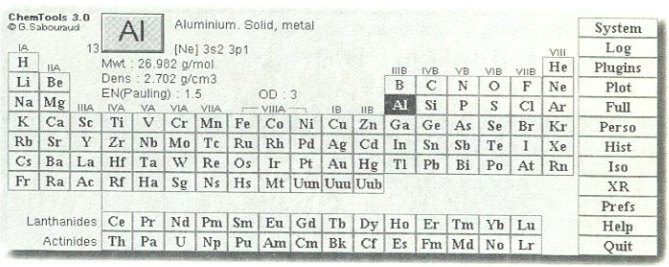
ChemTools

The Periodic table may just be a distant memory from school chemistry lessons, and you may not have given it much thought since then, but it can be fascinating when well-presented. Software versions are a good way of exploring the properties of the elements, and there are currently several competing programs that I'm aware of. The most complete and powerful one is *ChemTools* by Guillaume Sabouraud.

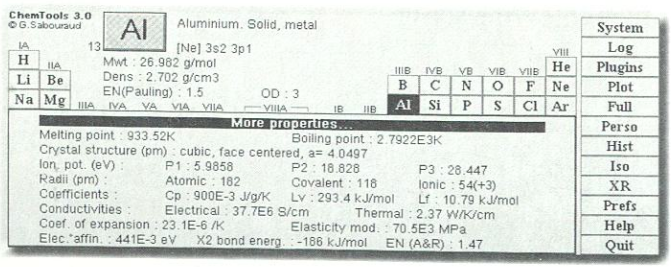
ChemTools allows you to tap the screen at the appropriate spot to select an element from the table, then presents you with a summary of physical and chemical properties in the lower portion of the screen. Switching to a different window at that point, you can selectively copy information into the clipboard to re-use in another application such as a WORD document. This data covers all the properties you'd expect to see, and much of it can be plotted against the atomic number, giving a visual impression of the variation from element to element. This can really show you why it's a 'Periodic' table, with a regular variation in some of the properties across the table.

The program is well thought-out and provides for plug-ins to be incorporated to add extra features. Currently there are three of these available, letting you calculate such esoteric things as redox potentials and vapour pressures. The author will provide support for users wanting to write their own.

Other features include a molecular weight calculator, lists of isotopes, X-ray properties and historical details regarding the discovery of each element. It really is very comprehensive, and most of these features are accessible from the extended toolbar on the right hand side of the screen as well as from the main menu.



The entire periodic table in view


ChemTools 3.0
©G.Sabouraud
Al
Aluminium. Solid, metal
13
[Ne] 3s2 3p1
Mwt : 26.982 g/mol
Dens : 2.702 g/cm3
EN(Pauling) : 1.5
OD : 3
More properties...
Melting point : 933.52K
Boiling point : 2.7922E3K
Crystal structure (pm) : cubic, face centered, a= 4.0497
Ion. pot. (eV) : P1 : 5.9858 P2 : 18.828 P3 : 28.447
Radii (pm) : Atomic : 182 Covalent : 118 Ionic : 54(+3)
Coefficients : Cp : 900E-3 J/g/K Lv : 293.4 kJ/mol Lf : 10.79 kJ/mol
Conductivities : Electrical : 37.7E6 S/cm Thermal : 2.37 W/K/cm
Coef. of expansion : 23.1E-6 /K Elasticity mod. : 70.5E3 MPa
Elec.*affin. : 441E-3 eV X2 bond energ. : -186 kJ/mol EN (A&R) : 1.47
System
Log
Plugins
Plot
Full
Perso
Hist
Iso
XR
Prefs
Help
Quit

Element information on display

Other chemistry-related tools

ChemTools_LE, also by Guillaume Sabouraud, contains the same periodic table but none of the extra functions. Freeware.

Periodic is at *www.planetepoc/asoftware* and is shareware.

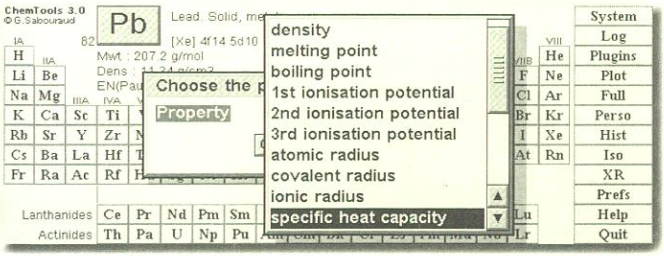
EPOC32 Periodic Table is at *www.orbit.org/perlib* and is shareware.

The *PocketInfo* web site (*www.pocketinfo.org*) also has several free items of interest:

'Chemistry & Technology' (DATA file - 418K)

'Chemical Reaction Energy calculator' (SHEET file - 8K)

'Elements' (DATA file -9K)



Selecting the variable to plot

Overall, ChemTools succeeds in presenting this potentially dry data in an interesting and entertaining way. As a learning tool that's an important quality, and makes ChemTools a worthwhile purchase for anyone studying the subject.

John Woodthorpe

ChemTools

From: usual shareware sources (by Guillaume Sabouraud - *www.chez.com/chemtools*)

Availability: now (English)

Runs on: Series 5

Price: £12 ('lite' version free)

Quality ★★★★☆

Value ★★★★☆

GIrBIL infrared serial link

It's gradually becoming a wire-less world. My three Psions all have infrared, my mobile phone has an infrared modem, and at work my laptop and some of the printers have an infrared 'eye'. I've looked at PC infrared eyes before but haven't had much use for them—until recently.

My Series 5 has had a faulty serial connector for some weeks now, probably as a result of continued plugging and unplugging of PC and modem. It finally gave up the ghost a short while back, and is now away being fixed. Nothing new there—over the years my machines have been back for attention on a few occasions, but I've always been able to take a backup first. Without a serial port, the need to get the *GIrBIL* installed and working for the purpose of this review became more urgent. I'm pleased to report that it worked faultlessly and saved the day.

The GIrBIL ('Ir'—get it?) is a small infrared eye housed in a plastic casing around 70mm long on a length of wire that plugs into, and is powered by, a PC's 9-pin serial (RS232) socket. Once connected, the PC 'driver' software supplied on floppy disk needs to be loaded, at which point you can then access your Psion via PsiWin without the aid of any additional cabling.

There's no paper manual supplied with the GIrBIL, just an HTML (web page format) file on the floppy disk. It's worth printing this out, as your PC may need to be rebooted during installation, thus making the manual inaccessible So that you don't get caught out in the same way that I did, note that it seems necessary to remove any IR support that your PC may have *before* installing the GIrBIL. Once I'd realised that, installation was largely automatic, swift and smooth, and after making the necessary modifications to PsiWin's connection screen, I could copy files quite happily.

As with most other 'eyes', you can expect to get good results at distances between 10cm and one metre. Experimentation showed I could get successful transfers up to 1.5m by dropping the baud rate from 115.2k to 57.6k.

In summary, the device works very well and is priced lower than most competing products. On the downside, a small paper manual would have been helpful, and I personally found that the cable length (just under a metre) was a little short. The GIrBIL scores over other products of this kind, however, with its blinking LED to indicate when data is successfully being transferred—a thoughtful touch.

The software supplied runs on either Windows 95 or Windows 98, but at present it *won't* work with Windows NT.

Pete Sipple

GIrBIL infrared serial link

From: Greenwich Instruments, tel: 0181 3024931

Availability: now

Requires: PC running Windows 95/98

Price: £39.95 including VAT

Quality ★★★★☆

Value ★★★½☆

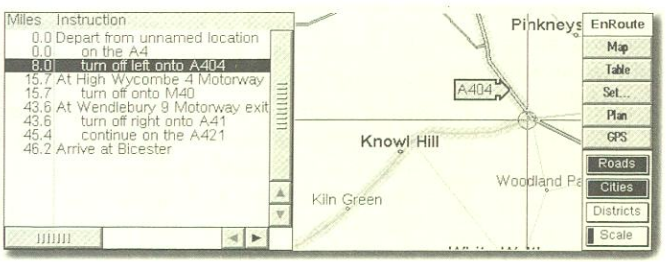
CoDriver

Yes, I *know* that a GPS is for most of us something of a toy, and I *know* it would often be simpler and cheaper to work with an inexpensive map book instead. But the fact remains that the technological wonder that is the Global Positioning System (see 'Starting up: GPS Receivers' in issue 19, pp50-52) has such a 'wow' factor that most of us have tried it, or wanted to try it, at some point in our Psion-owning lives. The software just keeps on getting better too. *CoDriver* is a new shareware product that piggy-backs onto Palmtop BV's *Route Planner* to provide aural and visual help in following a planned route.

Although Route Planner (reviewed in issue 14) is a very capable route-following aid in its own right, it's really not designed for single-person operation—at least not while in safe control of a motor vehicle. Even mounted close to the dashboard, and with all text zoomed up to a large font, there's far too much happening on-screen to absorb with one glance. With practice, and with GPS support turned on, the best you can do is get a very rough idea of your position relative to major roads and towns. There are also the problems of having to take your hands off the wheel to activate the backlight at night and having to take your eyes off the road. Which is exactly where CoDriver comes in.

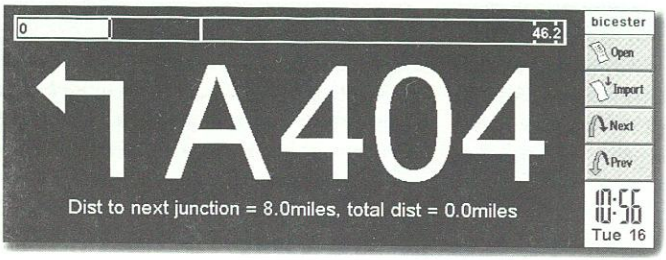
There's little wrong with the quality of Route Planner's table of route instructions, and CoDriver sensibly allows you to import these (or an equivalent table from *AutoRoute* or similar on a PC) directly into the program. In reality the import process is a slightly tortuous 'print to file' process, but CoDriver minimises the inconvenience very neatly by automating the whole procedure, so you can just sit back and watch.

Once loaded with the desired route and connected to your car-mounted GPS, CoDriver comes into its own, using reported



Driving a route in Route Planner

Starting the import process



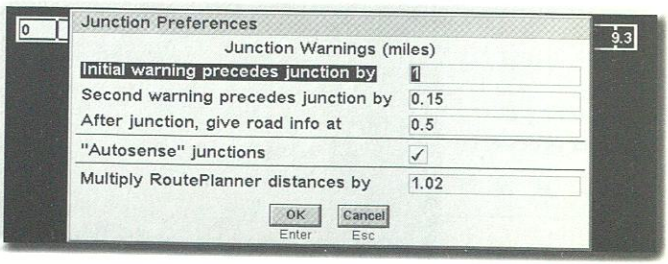
"Turn left onto the A404"

direction and speed together with dead reckoning to work out how far along each segment of your route you've travelled. Every distance and instruction in the original table is converted into a series of flash cards that appear on screen at just the right point, with a fairly loud bleep and an audio commentary. For example, "Turn-Left-Onto-The-A-Three-Two-Nine" and "Follow-The-A-Four-For-Seven-Point-Six-Miles". The software is clever enough to time its instructions to give you just enough advance warning of an impending junction. By default CoDriver reminds you twice for each one, the first a mile away and the second a sixth of a mile, though you can alter both these settings in the comprehensive preferences dialogs. Half a mile the other side of the junction, road information is then confirmed along with the distance you need to travel along it.

CoDriver behaved impeccably throughout my test period. There were no crashes, no GPS communications problems and no unexpected surprises, apart from the welcome one of discovering that for such an intuitive utility, the help screens are ridiculously well-stocked with information.

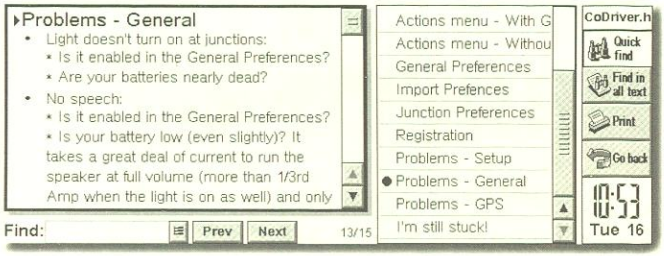
There are some super touches, such as the solving of the night-driving problem by turning on the backlight automatically while junctions and roads are being announced. I was also impressed by the way imported routes can be saved in CoDriver format for later re-use directly from the system screen.

Most of CoDriver's limitations are due to factors outside of its control. The most basic is that the Series 5 speaker, loud in a quiet office, is too quiet for the average motor car. The bleep helps attract your attention (as does the backlight turning on automatically) but it's easy to lose what's being announced. Having the information confirmed visually is therefore extremely welcome, although I would have liked to have seen the distance to the next junction displayed in a larger font.



Customising CoDriver—setting up the junction preferences

Help screens and troubleshooting information aplenty


Problems - General
• Light doesn't turn on at junctions:
* Is it enabled in the General Preferences?
* Are your batteries nearly dead?
• No speech:
* Is it enabled in the General Preferences?
* Is your battery low (even slightly)? It takes a great deal of current to run the speaker at full volume (more than 1/3rd Amp when the light is on as well) and only
Find:
Prev
Next
13/15
Actions menu - With G
Actions menu - Withou
General Preferences
Import Prefences
Junction Preferences
Registration
Problems - Setup
Problems - General
Problems - GPS
I'm still stuck!
CoDriver.h
Quick find
Find in all text
Print
Go back
Tue 16

Another problem is highlighted by CoDriver's author in the documentation. The program is simply an interpreter of the table of route instructions you give it, and is therefore at the mercy of route planning errors. In particular, Route Planner on the Series 5 is apparently prone to underestimating road segment distances, potentially throwing out CoDriver's 'ready-reckoning' approach. There is thankfully some automatic compensation for this in the software, with sudden changes of direction and speed near an expected junction being taken as a sign that you've encountered it, allowing fine corrections to be made to your calculated progress.

Minor deviations from the route plan can also cause problems and there's a manual way to advance or retard where CoDriver thinks you are, although having to use this to any great extent rather defeats the point of an intelligent program. The manual advance method may also come in handy for people who don't have a GPS hook-up, using the program as a simple route display aid, although without the satellite wizardry the whole solution becomes a lot less fun and little more useful than a set of written instructions on the dashboard.

Available as fully working shareware, this is a polished program that works extremely well within its stated limitations. If you own Route Planner, a Series 5 car cradle and a GPS this is an essential addition to your inventory.

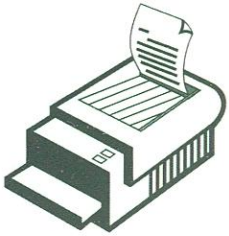
Steve Litchfield

CoDriver

From: usual shareware sources (by **Patrick Fox**)
Availability: now (English)
Runs on: Series 5
Price: £15

Quality ★★★★☆
Value ★★★½☆

Starting up: PRINTING



Once you've created a masterpiece on your Psion, you may want to print out a paper copy. Pete Sipple unravels the mysteries of printing...

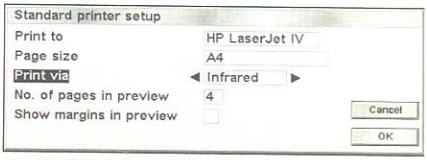
What options are available?
There are five ways to print from the standard Psion applications. We'll take a look at each one in turn.

1. Using a Parallel Link
If you want to print directly to most common printer types then you'll need a Parallel Printer Link from Psion. This cable connects your Psion to a printer's parallel (Centronics) connector. There are two units available from most suppliers:

- Series 5/3c/3mx/Siena - priced at less than £35. This adaptor is powered by a 9 volt 'PP3' battery.
- Series 3 'Classic'/3a (which use a different connector type to the other machines) - less than £30.

Armed with a parallel link, your Psion is directly compatible with the following printer models (a few of these options are missing from the Series 3 Classic and Series 3a, but you can download software patches separately—see later in the article for details):

- Canon Bubblejet (Series 3 only)
- Hewlett Packard Deskjet range
- Hewlett Packard Laserjet range



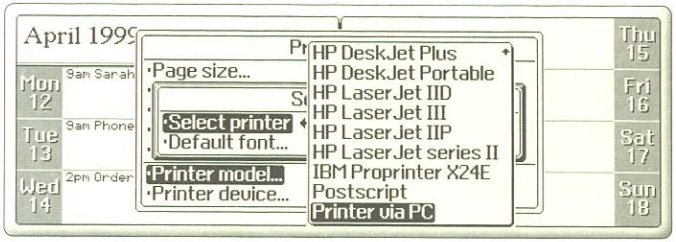
Selecting an appropriate printer setup on the Series 5

- Epson LQ
- Epson RX (Series 3 only)
- IBM Proprinter (Series 3 only)
- Apple LaserWriter Postscript (Series 3 only)
- Epson LQ Citizen PN60 (Series 5 only)

Pros - portable, easy to use.

Cons - not compatible with all printers, limited font (typeface) choices available.

2. Printing via a PC (using PsiWin)
If you have access to a PC then this option is likely to give the best end result. You need to connect your Psion to a PC with the PsiWin serial link cable. If you have a PC running Windows with a copy of PsiWin then you have all you need to print via your computer. It's a case of turning on the remote link (from



Printing from a 3c via a PC, selecting from the list of built-in printer drivers

your Psion's system screen). If using PsiWin 1.x, run the 'Psion Print' utility; if using PsiWin 2.x, make sure the 'wiggly line' is showing in your Windows 95 system tray. On your Psion, go to the application you wish to print from and under 'Print setup' select 'Printer via PC' (or 'Psion Print' in some cases). If your Psion doesn't have a 'Printer via PC option' (or similar), then you're missing a system file. See the 'Printing extra fonts' section later in this article.

If you have a very old PC running DOS, you should seek out a copy of the less sophisticated MCPRINT, which should be on your 3Link floppy disk.

Pros - no Psion-to-printer compatibility issues; extra fonts available, via Windows' TrueType technology.

Cons - relies on having PsiWin loaded on your PC, and having a PC constantly available.

3. Printing via infrared

You can print without connecting cables using your Series 3c/3mx/Siena or Series 5. More and more printers are coming with an infrared 'eye' as standard. If yours doesn't then devices such as the ACT-IR100M (see issue 17) will allow your printer to receive documents via infrared. To set this up use 'Print settings' from the application you wish to print from, choose your model of printer and set 'Print via' (Series 5) or 'Printer device' (Series 3 family) to 'Infrared'. Note that the Siena does not come with infrared printer drivers by default—you need to obtain separate drivers. Look for the file 'sieirpr.zip' at Psion's web site or on the *Palmtop* CDs.

More details can be found in our 'Starting up: Infrared' article in issue 22.

Pros - as per option 1, plus no cables, tidy and easy to use.

Cons - as per option 1, plus IR printers/devices are often more expensive.

4. Printing to a serial printer

While most printers have a parallel connector, a few are supplied with only a serial connector. Printing via serial is more complex to set up and you may also need a 9 to 25-way serial printer convertor and/or a null modem adaptor to make the connection. If you are trying to print this way, it's important to make sure that your Psion settings match the 'baud rate' and 'handshaking' protocols of your printer. The Psion manuals give you little help so you may need to refer to your printer manual and use trial-and-error before everything works. You will find some useful guidelines in our 'Universal connection' article back in issue 14.

Pros - as per option 1, plus no need for a parallel adaptor—just use your PsiWin cable.

Cons - as per option 1, plus initially more fiddly to set up.

5. Printing to a file

The final (somewhat advanced) option is supported by all Psion models and provides a way of getting your printed document into a binary format that can be passed on to other computers. If you don't have access to a printer then you'll need to use this option to pass the binary file to someone who can print it for you.

What types of document can I print?

You can print from most of the Psion applications, as well as from many third party software packages. On a Series 5 you'll find the options under 'File|Printing', or under 'Special' on the Siena and Series 3 family.

Which printers can I print to?

Theoretically you can print to any printer: dot matrix, inkjet/bubblejet, laserjet, even some impact printers. What is likely to prevent you from printing is the lack of a suitable 'driver'. Under your Psion's 'Print setup' option you need to tell the software which make and model of printer you are trying to talk to. Sometimes a little guesswork is needed if you can't get an exact match.

What is a 'driver'?

Psion supply special 'drivers', one for each printer type supported, which live (or can be installed) in your Psion. When you print, they send special commands telling the printer what to do. Basic text is easy, but paragraph, bold, superscript, typefaces, graphics printing and margins can become complicated. The newer the printer, the more features are likely to be supported by the driver.

I can't find a driver for my printer model

There are hundreds of printers on the market, and looking at Psion's 'Print setup', it might seem that only a tiny selection are supported. Fortunately, that's not the case. While it's true that printers work best with *exactly* correct drivers, most printers will be able to recognise output in a more basic format. For example, if you have an HP Laserjet 6, the Laserjet 3 driver should still work, although some of the document's formatting *may* not show in the final printout. If you're struggling, there are two basic drivers which should allow you to print on almost any printer: 'Epson LQ' or 'General'. One of these two should produce *some* kind of printout, but may not give you much more than plain text.

It's not working!

If your printer is refusing to print at all, it's probably one of two things:

- Check your link settings from the system screen. If you're printing via a PC, the link should be set to 'on'. Otherwise ensure that it is turned off.
- It could be the physical connection. Check that your printer is online, loaded with paper and that the cable is firmly plugged in at both ends. Switching your printer off and on again can sometimes clear a fault condition. Also, if using the newer parallel link, check that the batteries are in good condition.

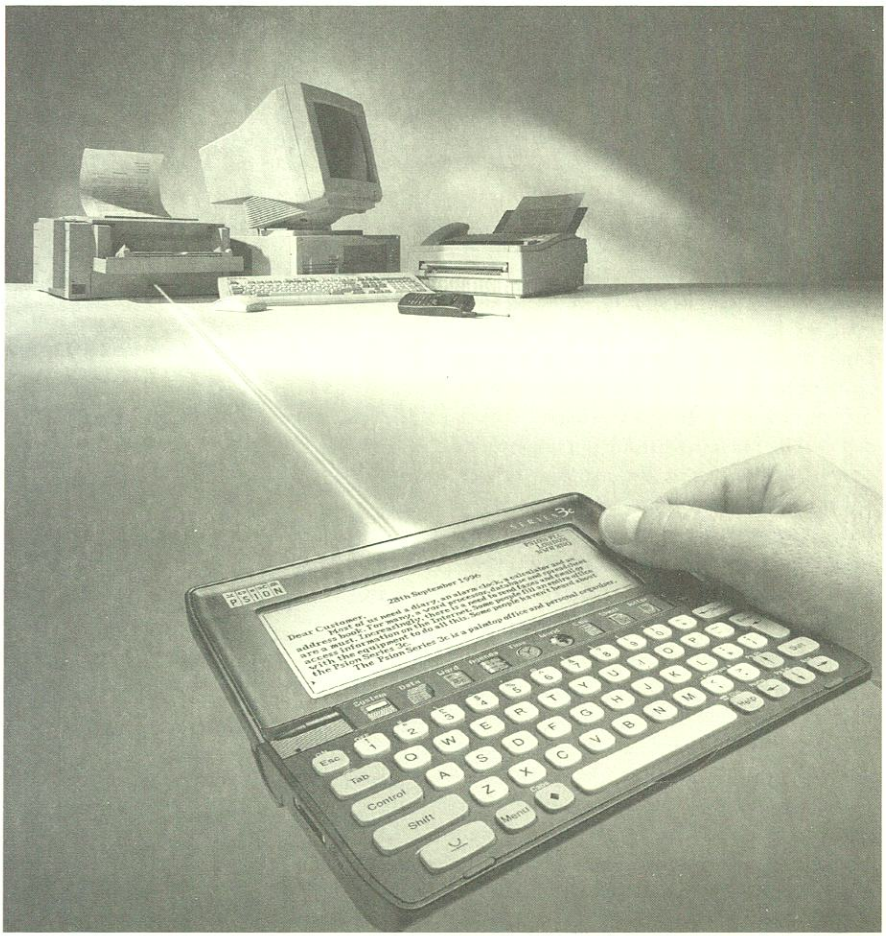
My documents aren't printing properly

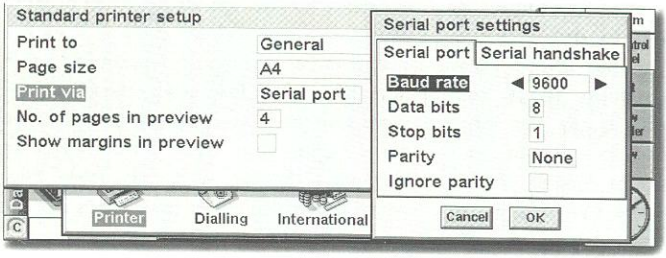
If you're getting odd characters or pages of garbage, or the layout's all wrong, then it's likely to be a driver problem. If you've tried every driver supplied by Psion, then there are three options open to you:

1. Print via your PC. You're then using the PC's own drivers, which are likely to be more compatible and allow you more fonts.

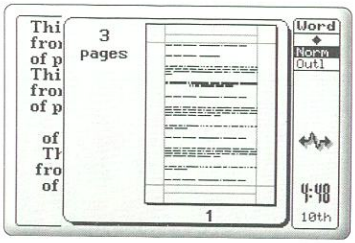
2. Change your printer's 'emulation'. By default, a printer will look for data in its own format, as supplied by the driver. Many printers are able to emulate those from different manufacturers, usually the more basic ones. You'll need to refer to your printer's manual. On older models, there's likely to be a small switch somewhere that needs setting; on a printer with an LCD display there'll be an option under one of the setting menus.

3. Search for the right driver. Psion occasionally release new printer drivers. Their web site or technical support department are the first places to try, followed by the usual shareware sources. If you're *really* ambitious, you could write your own drivers—you can download the file wdrkit.zip from Psion, which allows you create new Series 3 printer drivers. The file also contains the source code for Psion's own drivers.





Setting up a serial printer



Previewing on a Siena

What *can't* I print?

As stated above, without the right driver some functions may not be available, and you may get garbage if you try anything too complex for your driver. Graphics printing from the built-in Psion applications on anything other than a Series 5 is not really an option, due to the simple text-based drivers supplied by Psion. Landscape printing isn't an option with some of the supplied drivers either. The newer ones for the Series 5 address some of these issues, and if you want to print more than basic text you should upgrade accordingly.

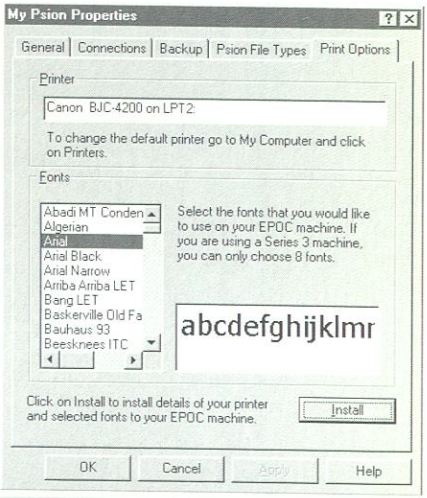
What printers do you recommend?

There are so many printers on the market that it's impossible to make any recommendation without knowing your exact needs. In the near future we'll be running a comparative review of the most suitable printers to partner a Psion palmtop. In general, one with an infrared eye will mean that you can print without bothering with wires. Laser printers offer the best quality, but are the most expensive. Inkjet printers tend to be a good compromise between quality and price.

If you want an easy life with minimum compatibility problems then go for a printer that's already listed in the 'Print setup' dialogs on your Psion.

What about portable printers?

Back in issue 11 we examined some of the smaller printers, including the Canon BJ-30 and BJC-70, the Olivetti JP90, the HP Deskjet



Adding your PC fonts

340, and the tiny infrared-enabled Pentax Pocketjet and Citizen PN60. If you are frequently a long way from mains power and doesn't want to mess with cables then the Citizen PN60i is worth investigating.

How do I print non-standard characters?
You can access characters that are not on your standard keyboard by holding down the [Control] key and typing a three-digit code. A list of the available characters can be found in the back of the Psion manuals. If you need to print a *Euro* symbol, see page 104 of issue 22.

How can I improve the appearance of my printouts?
Layout is all-important. You may need to adjust your margin settings and paper size.

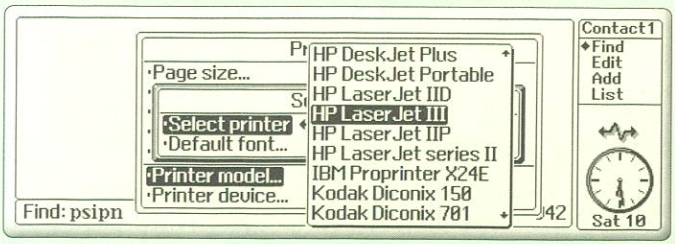
Psion's latest drivers

Series 5
Earlier this year Psion made available an enhanced set of printer drivers, available free of charge from the Psion web site. You'll also find them on recent *Palmtop* CDs.

- **Canon**: new typefaces have been added to the Bubblejet (BJ) mode.
- **Epson**: a new LQ mode has been added, for compatibility with Canon Bubblejet printers. Several other improvements and fixes including faster print speed and new Courier font sizes.
- **General**: page positioning improved.
- **PCL5**: HP LaserJet and DeskJet drivers—several improvements.

Certain printers don't support printing in landscape mode. An error is now raised if printing is attempted in landscape for these printers. For easy installation these new drivers are supplied in SIS format.

Series 3 range
Supplied in a Zip file, this collection of 'WDR' files can be copied into your \WDR\ folder, and adds support for printers including: Canon BJ10ex, BJ200, Citizen PN48, Epson FX-105, Kodak Diconix, and HP Deskjet 500, as well as new drivers for Epson and HP printers. There is also a new driver for Apple PostScript printers.

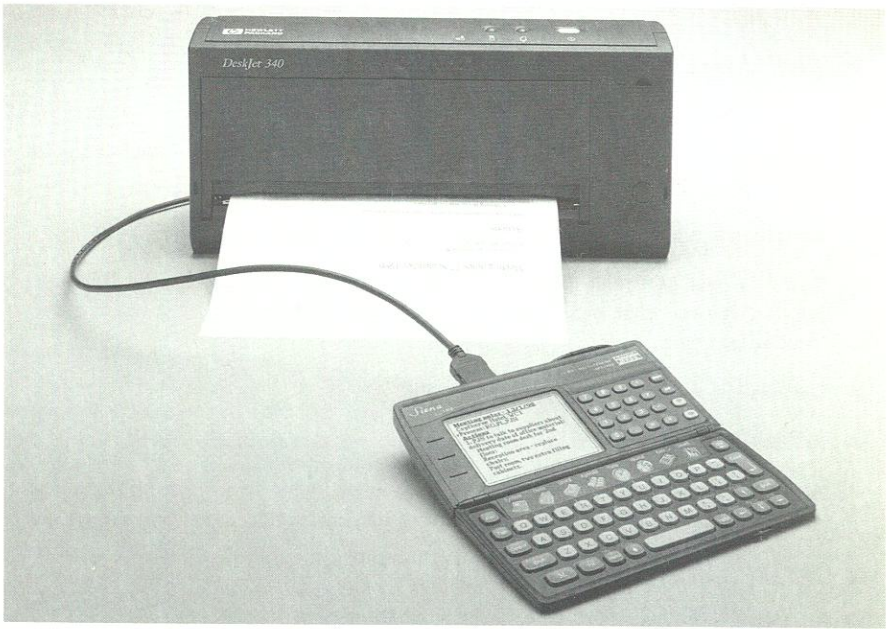


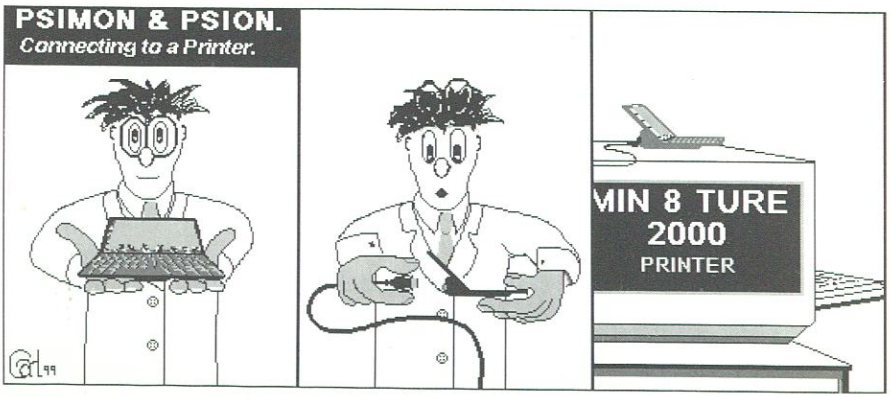
Support for new printers

Before wasting a sheet of paper, try a 'Print preview' and switch on 'Show margins'. See our 'Working with Word' feature in issues 6-11 for more on document formatting.

Can I add extra fonts?

If printing via a PC you can add support for Windows TrueType fonts. The exact procedure depends upon the version of PsiWin installed. The installation routine will also upgrade the printing system inside your Psion, adding the 'Print via PC' (or similar) option if not already present.





Convenient Classics

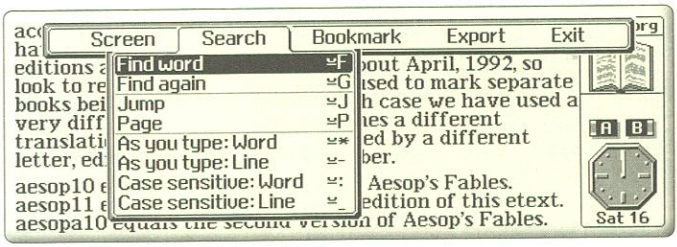
Take the tour round the world of 'etexts' and introduce your Psion to some classic literature

by Paul Nelson

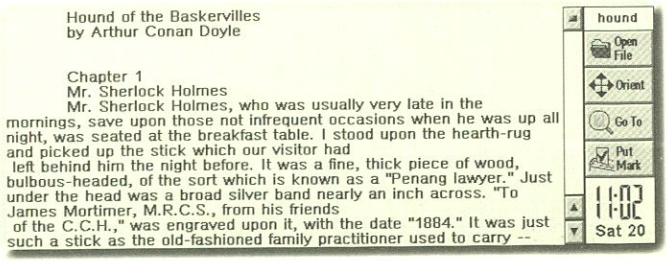
'Etexts', or 'Compressed Electronic Texts' are becoming something of a phenomenon in the world of palmtop computing. They allow you to take very large plain text documents while on the move, reading them on your Psion in spare moments or long journeys. And most notably of all, they're completely free.

Project Gutenburg

Psion owners have been part of the etext scene more or less since its inception. *Project Gutenburg* is an Internet-based collaboration between many enthusiasts keen to make the most of the thousands of written works that are now out of copyright, usually because the author died many



Reading a classic novel on the Series 3


Hound of the Baskervilles
by Arthur Conan Doyle
Chapter 1
Mr. Sherlock Holmes
Mr. Sherlock Holmes, who was usually very late in the mornings, save upon those not infrequent occasions when he was up all night, was seated at the breakfast table. I stood upon the hearth-rug and picked up the stick which our visitor had left behind him the night before. It was a fine, thick piece of wood, bulbous-headed, of the sort which is known as a "Penang lawyer." Just under the head was a broad silver band nearly an inch across. "To James Mortimer, M.R.C.S., from his friends of the C.C.H.," was engraved upon it, with the date "1884." It was just such a stick as the old-fashioned family practitioner used to carry --
hound
Open File
Orient
Go To
Put Mark
Sat 20

And again, this time using a Series 5

years ago. On their web site the Project makes classic novels, poems and plays freely available in plain text format, including material by such famous names as Sir Arthur Conan Doyle, Mark Twain and H G Wells.

Squeezing it all in

As you can imagine, the only problem with these texts is that they tend to be quite large (usually a megabyte or so)—far too large to attempt to open in either the Series 3 or Series 5 word processors and often too large to even store comfortably on a typical Psion palmtop. This, of course, is where the 'compressed' bit of the name comes in. Keen Psion owners have taken the most popular plain text files from the Project and compressed them using special utilities on a PC or similar.

Because certain words and parts of words tend to be repeated fairly often in the English language, a suitably powerful piece of software can analyse a megabyte of plain text and construct an index of the words used. For example, "The cat sat upon the mat" might be reduced to the letter combinations: "The", "c", "at", "s", "upon", "m", and it's hopefully easy to see how many thousands of words could be reduced to patterns and tables of commonly-used sequences. The actual mechanism is somewhat more complicated than this, but I'm sure you get the idea.

Compressed etexts are typically around 35% the size of the plain text originals—a very significant saving when you think about the cost of add-on disk space for the Psion, especially the Series 3 range. As an illustration, the entire text of the New Testament works out at around 500K, "The Return of Sherlock Holmes" about 300K and H G Wells' "The Time Machine" a paltry 90K.

It only remains to decompress each etext 'on the fly' when it's time to start reading, reconstructing the original text from the stored patterns of letters and statistics. A variety of public domain etext utilities are available on the Internet, several of which have been adapted and ported over to the two Psion palmtops (see the boxout for details). Typically, these programs do a lot more than just display the text, offering search facilities and bookmarks. Most even allow the text to be displayed 'sideways', i.e. you have to hold the Psion at right angles to your body and read it like a newspaper column. You may feel rather self-conscious doing this though, and passers by are liable to comment, "I think you're holding your palmtop the wrong way round".

Classic literature

A common reaction of many people when etexts are mentioned is to say something along the lines of "That's all very well, but most of the texts available are 100 years old and probably of little interest". Let me encourage you to try a few—I promise you'll be surprised. These old 'Classics'

hound
Open File
Orient
Go To
Put Mark
Sat 20
Chapter 1
Mr. Sherlock Holmes
Mr. Sherlock Holmes, who was usually very late in the mornings, save upon those not infrequent occasions when he was up all night, was seated at the breakfast table. I stood upon the hearth-rug and picked up the stick which our visitor had left behind him the night before. It was a fine, thick piece of wood, bulbous-headed, of the sort which is known as a "Penang lawyer." Just under the head was a broad silver band nearly an inch across. "To James Mortimer, M.R.C.S., from his friends of the C.C.H," was engraved upon it, with the date "1884." It was just such a stick as the old-fashioned family practitioner used to carry -- dignified, solid, and reassuring.
"Well, Watson, what do you make of it?"
Baskervilles
Hound of the
by Arthur Conan
Doyle

'Vertical' reading—are you brave enough?

are generally so-named for very good reason—they're a cracking good read.

Modern text too

Perhaps I still haven't fired you up sufficiently to investigate the etext phenomenon? Read on, for classic literature is only half the story. Contemporary reference texts such as manuals, specifications, help texts and news files can also be easily compressed and browsed at your leisure on the Psion. And because of the high compression available you don't even have to fully justify your use of precious disk space on a byte-for-byte basis. I'm sure you'll think of uses in *your* life for a compressed information system that can use files of any size without loss of access speed.

It's also worth noting that if the classic text you'd like to read hasn't yet been converted into etext format, it's not a huge task to track it down at the Project Gutenburg web site and compress it yourself. You'll probably need to use a PC, Mac or Atari to do the compression, but the process is simple and fairly well documented.

Compressed text formats

I said earlier that Psion owners were quick off the mark with etext. As early as 1995 software was available to compress and read etext files, with the '.TCR' file format (from 'TCReader') by far the most common. A year or so afterwards, rival pocket computers got in on the act, although with a different compressor and a different file format (bear with me and I'll explain why this is relevant to Psion owners today). The 'Aportis DOC' format, usually realised with files with a '.PRC' extension, became (and still is) hugely popular in the PalmPilot community, with similar compression efficiency to the *TCReader* software for the Psion.

The popularity of the PalmPilot, especially in the USA, has led to a collection of etexts in PRC format that's even larger than that collected in TCR guise, and now Series 5 owners can read both formats using *VReader5*. At the time of writing there's no equivalent application for the Series 3.

I do hope I've whetted your appetite. In the accompanying panels Steve Litchfield has listed the resources and information you'll find useful in your quest to get up and running with etexts. And just imagine how pleased your old school teachers will be to discover you ignoring the lure of television and other wonders of the modern age in favour of curling up with a classic tale from bygone days—with a bit of help from your palmtop.

Etexts on the Internet

For some convenient starting points in your search, try a few of the following:

PocketInfo - *www.pocketinfo.org* (start looking under Leisure [Art and Literature])

Project Gutenburg - *www.gutenburg.org*

Constantino Muzio's page - *members.xoom.com/books_psion/*

Memoware - *www.memoware.com*

Book Store On Line - *ftp://ftp.books.com*

CompuServe - the PSION forum's file library

In the Rain - *www.intherain.com/palm/*

Etext-related utilities

Reader

Barry Childress' original etext reading program for the Series 3. Although largely fully-working shareware, the unregistered version had an animated reminder which popped up every so often. Barry seems to have disappeared from the scene, leaving no possibility to register the program anymore, which is a pity. The program's last incarnation can still be downloaded from *3lib.ukonline.co.uk/reader.htm* and on all Palmtop CDs in *\library\units*.

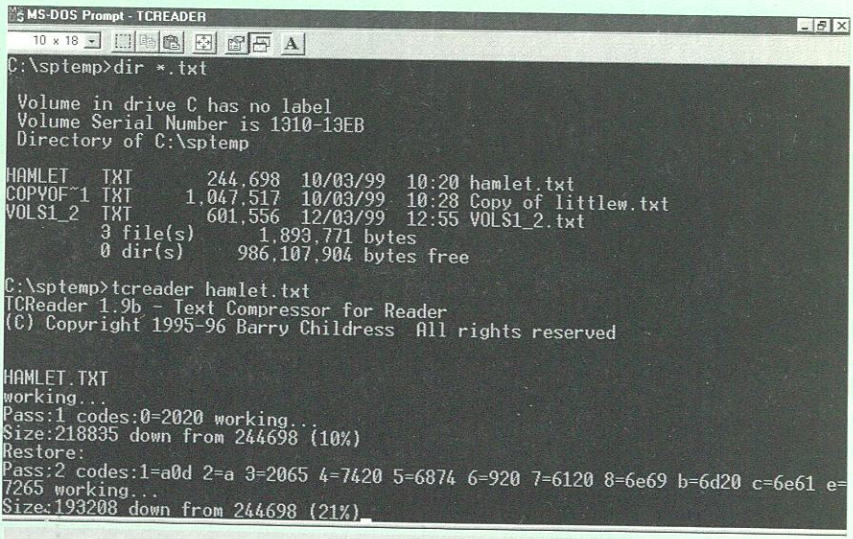
TCReader

Another of Barry's creations, supplied with Reader and intended to be registered with it, this is an intelligent DOS command line utility that creates highly-compressed TCR etexts from plain text files, e.g. TCReader MYTEXT.TXT will compress the file into etext format, and it's good practice to then rename the file to end in '.TCR', i.e. MYTEXT.TCR, so that its contents are obvious to yourself and anyone else who comes across the file.

Also supplied is the UNTCR program to convert etexts back to plain text, perhaps so that they can be added to or worked on in another application.

eTxtRead

This is where things start to get complicated. Peter Muys, unhappy with the speed of Reader (written in OPL), decided to use C to write his


MS-DOS Prompt - TCREADER
10 x 18
C:\sptemp>dir *.txt
Volume in drive C has no label
Volume Serial Number is 1310-13EB
Directory of C:\sptemp
HAMLET TXT 244,698 10/03/99 10:20 hamlet.txt
COPYOF~1 TXT 1,047,517 10/03/99 10:28 Copy of littlew.txt
VOLS1_2 TXT 601,556 12/03/99 12:55 VOLS1_2.txt
3 file(s) 1,893,771 bytes
0 dir(s) 986,107,904 bytes free
C:\sptemp>tcreader hamlet.txt
TCReader 1.9b - Text Compressor for Reader
(C) Copyright 1995-96 Barry Childress All rights reserved
HAMLET.TXT
working...
Pass:1 codes:0=2020 working...
Size:218835 down from 244698 (10%)
Restore:
Pass:2 codes:1=a0d 2=a 3=2065 4=7420 5=6874 6=920 7=6120 8=6e69 b=6d20 c=6e61 e=
7265 working...
Size:193208 down from 244698 (21%)

Compressing a text from DOS with TCREADER

own reader utility for the TCR etext format, with the result that *eTxtRead* for the Series 3 was born. Small and fast, it was an immediate hit until Barry Childress (rightly) pointed out that eTxtRead was using *his* compressed file format without permission. The two of them then worked out a compromise such that people who used the TCREADER part of Reader with the freeware eTxtRead would get a special version of the latter without ads for his competitor's application. Sound confusing? It is, and made doubly so by the fact that Pete Muys has *also* disappeared from the Psion world. In the meantime, just use the tools, put up with the odd nag screen and hope one of them eventually resurfaces to clear things up.

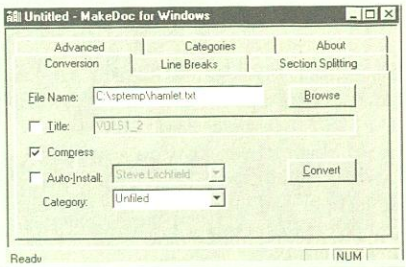
As with Reader, eTxtRead is available from *3lib.ukonline.co.uk/etxtread.htm* or on all Palmtop CDs in *\library\units* .

VReader5

The first, best, and only Series 5 etext utility, distributed as freeware. Programmed and supported by Jean-Luc Damnet, it supports both TCR and PRC formats and is available in virtually any language. Jean-Luc can be contacted at *jldamnet@antall.com* and the latest version of the application can be downloaded from (among other sites) *3lib.ukonline.co.uk/vreader5.htm* and is also on Palmtop CD05 onwards in *\library\s5misc* .

MakeDocW

A PC utility from the PalmPilot world, this is a Windows 95 utility to convert plain text to PRC etext format. In view of VReader5's PRC support, this is a good choice for making etexts if you're unsure about running TCREADER from the DOS command line. .

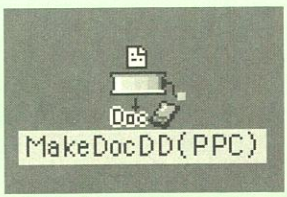


Win 95 compression with MakeDocW

MakeDocW is available for download from *3lib.ukonline.co.uk/vreader5.htm* .

MakeDocDD

Designed to create PRC documents from raw text files on the Apple Macintosh, it adds drag and drop simplicity to the conversion process, making it exceedingly simple to use. Visit *www.aportis.com/resources/AportisDoc/makedocutilities.html* for more details.



Drag and drop PRC files on a Mac

TCR

An Atari utility from Andrew Giddings (*gidds@cix.co.uk*) that converts plain text to TCR etext format. It's also freeware, includes the full source code and has a companion UNTCR program. You can find TCR on Palmtop CD05 onwards, in *\library\s5vault* .

Steve Litchfield

FOR SALE, WANTED, ETC...

Series 3a (2MB), leather case, 2 parallel cables, serial cable, 128K flash SSD, 128K RAM SSD, Scrabble, Berlitz phrase book, Hugh Johnson's wine guide 1994, Compute-a-diet and Pipemania - £150 ONO.
Contact: Emer Loughrey on +353 1 2835028 (Eire)
email: loughree@tcd.ie

Series 3c (2MB) - £110.
Contact: Andrew on 0113 2696991

PC Card Modem Adaptor for Series 3c/5 - £60, DACOM Gold Card V34+Fax PCMCIA Modem including WinFax Lite - £80, Series 3 (256K) - £50, 3Fax UK Modem for Series 3/3a - £60, 3-Link cable for Series 3/3a - £25, PsiWin 1.0 - £10, Widget Quick Reference Guide (3a) - £10, Telenote Link SMS software (with cable) for Series 3/3a - £10, Multivue database - £10, Act! 1.0 - £10, Soundmaster (3a/3c) - £10, Purple Software File Manager (3/3a) - £10. All prices ONO - discount for multiple items.
Contact: 01383 416688 evenings
email mino.manekshaw@mcmail.com

GSM upgrade kit to connect Nokia 2110 and Psion Dacom Gold card Global V34+fax - £60, Series 5 car stand - £40, Route Planner - £27, Series 5 Power supply - £10.
Contact: Sean Griffin on 01753 789 747 (day) or 0181 841 5482 (evenings)

Cyclone floppy drive for Series 3a - £90.
Contact: J K M Rawlinson on 0151 342 2232

Street Planner 99 - £35.
Contact: Kev Woods on 01309 691947 (after 6pm)

WANTED

Canon BJ10 or BJ20 Bubble-jet printer (for use with 3a), Widget Quick Reference Guide for 3a. North/ Central London preferably.
Contact: Peter Birtwell on 0181 348 8516

WANTED

ColourShow VGA PC Card and presentation program for Geofox One.
Contact Sebastian Hochstetter on +49 6183 5662 (telephone/fax - Germany)
email: psisoft@csi.com

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This service is not available to non-subscribers, nor to Psion dealers. We bear no liability for items bought or sold from this page.

Battery Breakdown

From alkalines to rechargeables and mains adaptors to backup batteries, here's the lowdown on powering your Psion

by Nigel Wright

Introduction

I'm often surprised by how much discussion is provoked by the seemingly mundane topic of batteries, and frequent visitors to the *comp.sys.psion.misc* Internet newsgroup will bear witness to this. This article is designed to help users make an informed choice in selecting the most suitable battery types for use in Psions, together with some general comments on mains adaptors and other power miscellany. Let me begin by saying that there's no single best solution—the best battery type for *you* depends upon how you use your machine. Read on.

Types of batteries

Series 3 and Series 5 machines both use the universally standard 'AA' cell, also referred to as MN1500, LR6 or UM-6. AA cells are not all the same though, and types are available utilising a number of different technologies, each with their own pros and cons.

The smaller 'AAA' cells as used in the Siena have not been discussed specifically within this article, though basic characteristics of the various battery types are of course equally applicable, though lifetimes of AAA cells will generally be around half that of AA equivalents.

Single-use disposables

These include: *Zinc Carbon*, *Zinc Chloride*, *Alkaline* and *Lithium*.

Alkalines

These are, for good reason, the most popular technology. They are a well known quantity, mature, widely available, and offer good life and performance. They are probably the most versatile of all types and can be used in virtually all applications.

Performance is predictable over their life, they have a long shelf life of about five years, high capacity and reasonable cost.

Capacity and cell exhaustion

Battery capacity

There are two battery basics that the user may wish to become acquainted with: *Terminal voltage* (measured in volts), and *Capacity* (measured in milliampere-hours). Voltage is the potential of a battery to do work and capacity is the amount of electrical current it can deliver over a period of time, i.e. its energy.

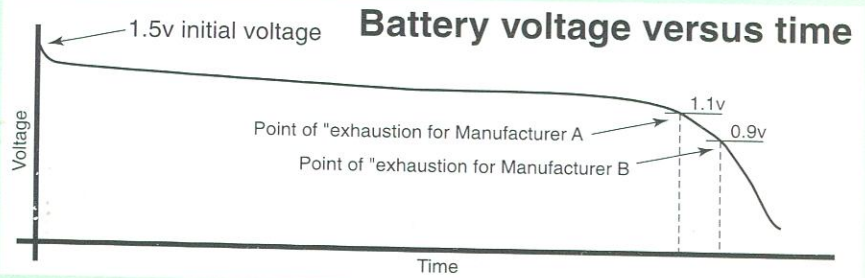
A typical alkaline AA cell has a nominal capacity of 1800mAh, which means it can be described as being able to deliver 1800mA for one hour before it is exhausted. Normally speaking, nobody puts this sort of load on an AA cell because it will cause overheating and possibly failure. The Series 5 is a 'real world' application with an average load of 100mA, which means we can expect to get 1800/100=18 hours of use before the batteries go flat.

Just because a cell has a higher capacity than another doesn't necessarily mean that it will last longer or is better. Batteries using different technologies have differing characteristics and therefore respond differently to loads. Some suit certain applications very well while being unsuitable for others, so it's important that the user selects the type most appropriate for their particular application.

When is a battery flat? When it fails to allow operation? Well, not if you're a battery manufacturer. A cell is termed *Exhausted* only when its *Potential* (the voltage across the terminals to you and I) has dropped below a certain level, such as 1.1 volts.

Many manufacturers have differing criteria for exhausted cells and this is where confusion can occur. 'Manufacturer A' might say that their cells are exhausted when they reach 1.1 volts, 'Manufacturer B' might say theirs are exhausted at 0.9v. As the voltage decreases with time and use you can see that the cell which is classed as exhausted at 0.9v lasted longer—or did it?

If we assume that both cells in a Psion discharged at a similar rate then we can assume that the potential across the two cells together dropped from the initial 3v to 1.8v (the point where manufacturer B states his are exhausted). Most Psion owners know that the machine would have ceased to function well before then, in the case of a Series 5 usually at around 2.0 volts. So for all intents and purposes the *real* point of exhaustion is 1.0 volts per cell, not 0.9v, and therefore the effective capacity (as far as the Psion is concerned) is somewhat different to that claimed. Check out the sketch below to see what I mean.



Cell exhaustion

Some manufacturers claim impressive capacities of 2600-2800mAh for their alkalines. Has anyone ever got anywhere near that? I haven't, and I'll bet most readers haven't either. That's because the point of exhaustion (as far as a Psion is concerned) occurs long before the point the battery manufacturer specifies. In real life these claims seem to translate into about 1800-2000mAh for a Series 3 and 1500-1800mAh for a Series 5. The different capacities probably reflect the differing demands that each Psion places upon its batteries.

While quoted capacities are a *reasonable* indicator of battery performance, they should generally be taken with a pinch of salt.

Rate of discharge

There is always an optimum rate of discharge for any type of cell. This is chosen to reflect the chemical properties and the need to avoid overheating, damage, etc. It is usually determined by manufacturers in testing and can often be found in their datasheets.

Rates of discharge are often expressed in terms of a cell's capacity, *C*, i.e. 0.5C means 0.5 x capacity. For example, if a cell's capacity is 1000mAh and the manufacturer specifies that the discharge rate shouldn't exceed 0.5C, this means 0.5 x 1000=500mA, i.e. the load shouldn't exceed 500mA.

This maximum rate of discharge is important if full performance is to be achieved. When selecting cell type the user should consider the load demanded by the application.

Tech-info: Alkalines

New cells deliver a nominal 1.5 volts with quoted capacities in the 1500-2800mAh range.

Terminal voltage degrades right from initial use, so while they start at 1.5v they soon drop to a working level of 1.3-1.4v for a good part of their life. They are usually classed as exhausted at around 0.9-1.0v.

Some brands of alkalines now have battery condition testers incorporated—I regard these as little more than a marketing gimmick. I haven't experienced it myself, but in Psion circles there is evidence to suggest that these testers can actually *reduce* life. This appears to be because they are a tight fit in the Series 5's battery compartment—so much so that it can cause the testers to become activated while in place in your machine, thus causing extra battery drain.

Among the reputable makes are *Duracell*, *Energizer*, and *Ever Ready*. I was surprised to find during my own testing that *Safeway*'s own brand offered the best performance at the lowest cost!

The *Duracell Ultra* batteries that have recently appeared on the market claim to offer longer life in "High-Tech appliances", though from our own experience we've found that the slight performance increase doesn't seem to warrant the extra cost of *Ultras*.

Here's a summary of the pros and cons of alkaline batteries:

Advantages:

1. High capacity.
2. Long operating life.
3. Readily available.
4. Suitable for many applications.

5. Stable performance
6. Reliable.
7. Long shelf life.

Disadvantages:

1. Disposable.
2. Not cheap in the long run.
3. Gradual decay in performance throughout their life.
4. Create large amounts of waste because they can't be reused.

Zinc Carbon

These are the real 'cheapies' you see in the supermarket, and are really only suited to occasional use, or undemanding tasks such as powering clocks. They cannot be recommended for use in something like a Psion, unless nothing better is available.

Zinc Chloride

These are suitable for low to medium demand applications and represent one step up from zinc carbon. Capacities are about 1100-1500mAh. Like zinc carbon, they are becoming rarer on the shelves as alkalines become cheaper and more popular. The price differential between the two isn't sufficient to justify their purchase in preference to alkalines.

Lithium

This type is a fairly recent addition. I know of only one manufacturer currently offering them in the UK: *Energizer*. They cost 2-3 times that of alkalines but offer claimed capacities of up to 3000mAh, weigh 20-30% less than alkalines, work exceptionally well at low temperatures and boast a 10 year shelf life. Superb high load performance right to the point of exhaustion means they are especially suitable for very high power applications, but are equally usable for other tasks. They have a discharge characteristic similar to NiCd (see next few pages), which means that when they *do* expire, they do it quickly.

The cost means you'll be unlikely to find them in the High Street—expect to pay around £8-10 for four. The current Energizer lithium cells are easily recognisable as the silver ones with a red top.

Tests in a Series 5 revealed a capacity of around 2200-2600mAh (around 22-26 hours of use), so when compared to alkalines on a cost versus capacity basis they aren't the most economical solution. However, if you're away from base for extended periods and require long life, light weight and high performance then these are the batteries to use. Here's a summary:

Advantages:

1. High capacity.
2. Excellent high load performance.
3. Long operating life.
4. Lightweight.
5. Good low temperature performance.
6. Long shelf life.

Disadvantages:

1. Purchase price.
2. Not readily available.
3. Disposable.

Rechargeable or reusable alkalines

Reusable alkalines can replace disposables in some applications. They are most suitable for low-power applications. The limited cycle life is offset by low self-discharge which makes them

ideal in applications such as clocks and occasional use in torches, etc.

Recharging alkaline batteries is not a new idea, and normal alkalines can actually be recharged with an appropriate charger. Manufacturers don't recommend it—presumably because their income will suffer. *Recharging ordinary alkalines does however present some risk, as it can generate hydrogen which can cause an explosion.*

The major difference between a reusable and a standard alkaline is in the *energy density*. In simple terms this means that a reusable alkaline sacrifices some performance for the benefit of its recharging ability. The life of the reusable is directly influenced by how far you discharge it, so if you routinely run them until they're completely flat you'll reduce the number of cycles they can endure.

Although there are users who successfully employ this type of battery, I feel that it isn't the most suitable for use in a Psion, which tends to have high peak loads (primarily when writing to flash disk or running the backlight). Using a special charger costing about £15, and if managed correctly, rechargeable alkalines can be recharged about 25 times before complete exhaustion. Correct management means recharging *before* they are flat, i.e. around halfway through their discharge cycle. This limitation means the effective capacity in normal use is about 500-600mAh—about 5-6 hours of life after only a few cycles.

Initial capacity is close to conventional alkalines at 1400-1500mAh. In theory they outperform NiCds, but because heavy discharging reduces their ability to be recharged this supposed performance advantage is much narrower than one might suppose. Couple this with the need to carefully recharge them when they're only half discharged, together with higher operating costs and it's hard to argue in favour of them.

Another limitation is their relatively poor load capability. Although adequate for portable audio equipment, they don't cope well with sustained high power drain (such as writing to SSD or CompactFlash while the backlight is on).

The purchase price of reusable alkalines is relatively low at about £5.50 for four, but the cost per cycle is high when compared to NiCd. Whereas the NiCd costs about £0.005 per cycle over 1000 cycles, the reusable alkaline costs £0.55 per cycle over 10 cycles. The best thing that can be said is that the technology of the chargers allows the user to usefully extend the life of alkalines which might otherwise have been discarded. Here's a summary:

Advantages:

1. Lower running costs than normal alkalines.
2. Less waste than normal alkalines.
3. The technology allows useful extension to the life of alkalines.

Disadvantages:

1. Higher running costs than NiCd or NiMh.
2. Limited life of around 25 cycles.
3. Require careful management of the discharging process for best performance.
4. Limited capacity after first recharge.

Rechargeables

Rechargeables can replace most conventional batteries in medium to high current applications. They aren't suitable for low drain applications like clocks, where *self-discharge* rates (i.e. the rate at which a battery's energy will 'leak' away, even if simply left alone) can exceed the actual load placed upon them. Rechargeables come in

two flavours: **Nickel-Cadmium (NiCd)** and **Nickel Metal Hydride (NiMh)**. Both types have lower capacities than conventional alkaline or zinc chloride cells.

For both types the initial costs are relatively high, at about £7-15 for the charger and an additional £5-7 for four AA NiCd cells, or £10 for four AA NiMh cells. However, over a life of more than 1000 recharge cycles this cost is insignificant when compared to other battery types. Recharging costs are negligible.

NiCd in depth

The NiCd is probably the most popular choice of rechargeable battery. It's a mature technology, used where long cycle life, high discharge rates and low running costs are required. NiCd has less capacity than NiMh, is cheaper to purchase and requires more maintenance, but has better self-discharge characteristics. Capacity is usually 500-650mAh, although cells are now appearing with capacities as high as 950mAh. In practice my nominal 650mAh cells give a life of 550-600mAh and 6-7 hours when used in my Series 5.

Newer battery technologies initially resulted in a drop in the popularity of NiCds, but subsequent recognition of the limitations of the alternatives has led to renewed interest.

Advantages:

1. Fast charge capability.
2. Good cycle life of 1000-3000 cycles if properly maintained.
3. Excellent load performance, even at cold temperatures.
4. Easy to recharge after prolonged storage.
5. Extremely low running costs.
6. Lower waste due to fewer cells required in the long term.

"Memory effect"

Memory effect is the phenomenon which results in the loss of capacity in rechargeables. NiCd is prone to this if not correctly charged. It usually occurs when a NiCd is repeatedly partially discharged before charging again. If a cell is discharged to half full, charged, and then discharged to half full again it can be 'fooled' into thinking that the half-full level is actually the empty level. If this is done repeatedly then the effective capacity is reduced.

The memory effect can be avoided by periodically (every 4-5 cycles) fully discharging the cell before recharging again. The better chargers provide this facility automatically, but users can achieve the same by using a pocket torch to completely discharge the cell.

NiMh is not so prone to memory effect and can generally be recharged at any time during the cycle. This is the main advantage they have over NiCd.

Disadvantages:

1. Require a maintenance strategy for optimum performance.
2. Lower capacity than alkalines, lithium or NiMh.
3. Suffer from 'memory effect' if not properly maintained.
4. Require a good quality charger for best results.
5. Contain Cadmium, which is highly toxic and requires special disposal.

The NiCd prefers fast charging over slow charging, and cheap basic slow chargers are not the best ones to use if full performance is to be

realised. NiCds shouldn't be left on charge for extended periods with occasional periods of use in between—it's better to charge and use them right away.

NiCds benefit from occasional discharge to just below the rated exhaustion voltage of about 1v. Periodic full discharge helps to guard against the *memory effect*, improves life cycle, and maintains capacity.

Most NiCd batteries are suitable for fast charging, but care must be taken to avoid excessive heat build-up, otherwise life and charge acceptance will be reduced. As most commonly available fast chargers operate with a constant current and a timer I recommend that users avoid them unless the charger has some means of temperature detection. To ensure full charge some units tend to overcharge the batteries—regular overcharging will reduce capacity and cycle life.

Most rechargeables have a safety vent to release excess pressure if overcharged. Evidence of its operation can be seen in the form of white powder which escapes from the vent if it opens.

NiMh in depth

NiMh provides improvements in capacity over the NiCd at the expense of reduced cycle life, lower load capability and higher purchase prices. Capacities are usually 900-1200mAh. NiMh's advantages over NiCd are:

- Around 30% more capacity than standard NiCd.
- Less prone to 'memory' effect. Periodic 'exercise' cycles need to be done less often.
- Can be recharged at most points in the cycle without detrimental effects.
- Fewer toxic metals—they're labelled as "environmentally friendly".

Unfortunately, the NiMh trails behind NiCd in some important areas:

Cycle life: the NiMh is rated for only 500-1000 charge/discharge cycles. The battery's longevity can be damaged by discharging the cell too deeply.

Charge rate: the NiMh generates much more heat during charge and requires a more sophisticated charger for best performance. This heat build-up prevents the use of NiCd-type high charge rates, so the time taken to fully charge a NiMh is usually around twice that of a NiCd. Trickle charge must also be controlled more carefully than on the NiCd. These factors mean that many NiCd chargers are unsuitable for NiMhs.

Discharge rate: the recommended maximum discharge current of NiMh is significantly less than that of the NiCd. For best results, manufacturers recommend a load current of 200-600mA. The Series 5's requirements are such that the NiMh is not used in a manner which gets the best performance from them. For this reason, together with a high self-discharge of around twice that of NiCds, I wouldn't recommend NiMh unless you use your Psion quite intensively.

Capacity: NiMh delivers about 30% more capacity than a NiCd of the same size, but the performance gap is reduced if one considers the latest high-capacity NiCds now on the market. These come very close to NiMh.

Price: the price of the NiMh can be about twice that of NiCd. In comparison, ultra-high capacity NiCds cost slightly less than NiMh, while delivering similar performance. Therefore on a capacity versus cost basis, ultra-high capacity NiCd is generally better.

Self-discharge in rechargeables

Self-discharge is an unavoidable characteristic. It's not a manufacturing or design fault, although poor manufacturing and improper use can promote it.

NiCd and NiMh exhibit inherent high self-discharge. If stored, a new NiCd loses about 10% of its capacity in the first 24 hours after being removed from the charger. The rate of self-discharge is then about 10% per month thereafter. This means that rechargeables are not suitable for low load applications or for Psions that are used only occasionally.

Chargers

The performance and longevity of rechargeables depends very much upon the quality of the charger. When purchasing rechargeables give careful consideration to the charger. Low-cost chargers that come as a package with four AA cells are generally quite poor.

When buying a charger, look for the following:

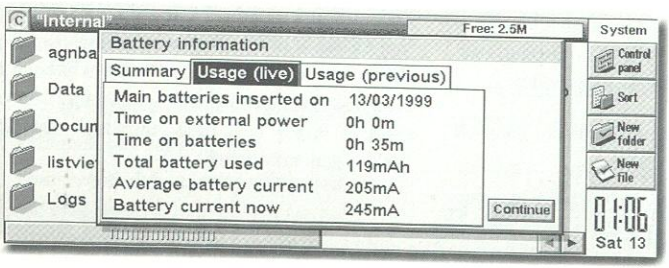
- NiCd chargers should ideally have a charge rate of 250-500mA.
- A NiMh charger should be specified explicitly for use with NiMh cells.
- NiMh chargers should ideally have a charge rate of 200-400mA.
- All chargers should have at least one means of automatically terminating the charging process, i.e. a timer and/or a temperature sensor.
- Try to get a charger with a deep-discharge function incorporated.
- Avoid fixed low-rate chargers (50-150mA) with no termination method. Invariably they will either overcharge or undercharge.

In general, it is better to fast charge nickel-based batteries if a quality charger is available. The best chargers use a charge method called *Negative Delta V* (NDV). They are now beginning to appear at a reasonable cost—Maplins (tel: 01702 554000 in the UK) sell one which can handle NiCd and NiMh at variable fast charge rates without the risk of overcharging. The part number is PK19V and the current price is £29.99.

Solar powered chargers are a neat idea, but unfortunately they tend to kill NiCds because their charge rates are too low to be truly useful. This can render the cells more susceptible to memory effect.

A word of warning on rechargeables

The Series 5 is rather more demanding of its batteries than the Series 3: the screen is larger, it has more memory, a backlit screen and the ability



High power consumption on a Series 5 with the backlight on and saving to disk

to drive large CompactFlash disks. These all conspire to create a hefty load on the batteries.

When conventional battery types are used in a Series 5, the discharge characteristic is gentle. One by one you'll find that audio, backlight and write-to-disk functions are lost—when using rechargeables you'll probably lose all functions at once. This can present a problem in that they give excellent performance right to the end of

Here are some statistics obtained from *actual* use in a Series 5:

Typical performance figures

	NiCd	NiMh	Reusable alkaline	Alkaline (Duracell)	Lithium (Energiser)
Specified capacity (mAh) [1]	500-900	900-1200	1500	2800	2600-3000
Nominal voltage (V)	1.25	1.25	1.5	1.5	1.5
Cost per cell (approx.)	£1.25	£2.50	£1.50	£0.90	£1.75
Cycle life (no. of charges)	1000-3000	500-1000	25	n/a	n/a
Cost/cycle over typical lifetime [2]	£0.005	£0.013	£0.66	£0.90	£1.75
Typical life-time when used in Psion Series 5 [3]	6-9 hours	9-12 hours	5-6 hours (approx.)	18-22 hours	22-26 hours
Operating temperature range (°C)	-40 to +60	-20 to +60	0 to +65	-30 to +70	-40 to +50
Fast charge time (approx.)	1-2 hours	4-5 hours	Varies - 4hrs-1 day	n/a	n/a

NOTES:

1. Capacity as specified by manufacturers - actual figures may vary substantially (see article)
2. Cost figures given take purchase cost of chargers into account (where applicable)
3. Typical lifetimes assume batteries to be used within approximately one week

their life, whereupon they expire suddenly with little warning, possibly while writing to disk. This risks causing data loss and disk corruption. If you are working on an important document, make sure you save often.

Battery monitoring on the Series 5 doesn't appear to be as good as that of the Series 3—often the first you know about impending exhaustion is when switching on. Additionally, Psions only record usage when they are actually switched on. As they draw some current even when switched off, it's feasible to put a new set of batteries into the unit, leave it switched off for several weeks, and then come back to it find that the batteries are flat. Therefore don't use rechargeables if your unit spends large amounts of time not being used.

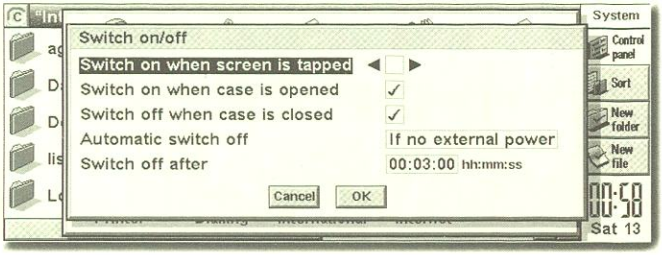
Management of rechargeables

The biggest drawback of rechargeables is the requirement for some kind of management strategy in order to maximise their life and capacity. Frequent complaints in the newsgroups about sudden discharge, poor life, etc. are largely down to people not understanding how to use them to the best effect.

- Buy a good quality charger as outlined above.
- Fully discharge NiCd cells once every month or so to help to keep the 'memory' effect at bay. Again, the better chargers have built-in discharge functions that automatically discharge a cell to the right level before recharging.
- Do not overcharge (exceed the recommended charging time), temperature or charging current—follow the instructions carefully.
- Always keep a spare set of cells to hand so you won't be caught without power.

General battery tips

- Keep battery contacts clean—wipe them occasionally with a cotton bud soaked in cleaning alcohol.
- Do not handle backup batteries with bare hands—finger grease can prevent good contact and discharge them.
- Change batteries at the first signs of exhaustion.
- Don't mix different battery types or makes.
- Always change your AA batteries in pairs.
- Back up your data regularly.
- Don't perform write cycles to SSD or CF disk when batteries are getting low. This may cause disk corruption.
- Don't be tempted into squeezing the last drop out of cells by heating them up—this can cause leakage from the cell which may damage your Psion.
- Use a mains adaptor for intensive operations if possible.
- Adjust the switch on/off settings on your Psion to reduce the amount of time the computer remains on while idle.
- If your Series 5 is showing high current drain with no programs running then try a soft reset—the battery monitor can occasionally get confused.
- With the Series 3, don't leave the link on when not in use—it significantly increases battery drain. This doesn't affect the Series 5 to the same degree.



Adjusting the switch on/off time on a Series 5

Mains adaptors

Running your Psion from a mains adaptor is of course the best way to preserve battery life. If your machine spends large amounts of time desk-bound, performing lengthy transfers over a serial link, performing writes to SSD or CF disk, or is often used with the backlight on, you should consider a mains adaptor.

The obvious choice is Psion's own model. It's compact, well-made and is designed for the job—unfortunately it isn't cheap. You *could* investigate buying a third-party unit, but be careful. When purchasing a non-Psion unit ensure that it is fully regulated to the appropriate voltage for your Psion. Regulation is *essential* if the output voltage is not to vary with changing current load. The output of non-regulated supplies can swing wildly, to the detriment of your Psion.

For a Series 3, the mains adaptor should be capable of supplying 9-10v at up to 175mA, for a Series 5 it should provide 6v and 1000mA. Check that the polarity of the connector is correct. *Be aware that use of such a unit may invalidate your Psion's warranty if anything goes wrong.*

Conclusions

As I said at the beginning of this article, there's no single best solution. Some people don't mind the maintenance requirements of rechargeables, others hate them, and don't mind paying higher prices for disposables. Select a type based upon your requirements, bearing in mind the information in the table on page 63.

Battery choices:	*In order of preference...*
Low use:	use alkalines
Low running cost:	use NiCd (1) or NiMh (2) or reusable alkalines (3)
High use, low running costs, life:	use NiCd (1) or NiMh (2)
High use, life, low running costs:	use NiMh (1) or NiCd (2)
High use, long life, reasonable cost:	use alkalines
High use, away from base, long life:	use lithium
General all-round use:	use alkalines
Reliability:	use lithium (1) or alkalines (2)
Storage:	use lithium (1) or alkalines (2)

Maplins sell a range of possible candidates for a reasonable price (I'll avoid any recommendation because I haven't tested any). Personally, I prefer the Psion unit, because if one's prepared to spend up to £400 on a palmtop computer then surely one can afford £20 for the recommended mains adaptor for complete peace of mind?

Backup batteries

The purpose of your small backup battery is to preserve the internal memory and guard against data loss in the event of power loss or while changing the main AA batteries. Both Series 3 and Series 5 machines use a 3 volt lithium cell (CR1620 or CR2032 respectively). Once your main batteries approach exhaustion *don't* persist in using them, as this will risk draining your backup battery, as will leaving flat AA batteries in the Psion for extended periods. A CR2032 has a limited nominal capacity of 220mAh, so it doesn't take long to drain it. Even when switched off a Series 5 consumes about 1-2mA, so the backup could be exhausted within a few days. For extended storage, use fresh alkalines or lithiums (don't use rechargeables, as self-discharge will reduce their lifetime).

If you follow these guidelines, it's reasonable to expect a backup cell to have a life of around 18 months in a Series 3 and 12 months in a Series 5. As they are lithium cells with a long shelf life, there's no reason why you shouldn't keep a spare in your Psion's case.

Battery monitoring utilities

There are numerous shareware and freeware utilities designed to monitor the condition of your Psion's batteries more accurately. Some have a full feature list, some are lean, and some are better than others. None of them (in my experience) are particularly effective. If you really want to be able to predict when your batteries are going to expire then gather historical data for your own usage pattern and put it into a spreadsheet!

The future...

With ever increasing memory, more processor power, larger backlit and colour screens, demands upon batteries continue to increase. This is balanced to some extent by greater integration in the electronics and improved device performance. Unfortunately, AA cell development doesn't seem to be maintaining pace and some palmtops now employ built-in rechargeable lithium-ion cells. The writing is on the wall for the humble AA, at least as far as high-end palmtop computing is concerned.

If you've any comments or information then please email me at: niwright@cix.co.uk .

Advanced spreadsheet techniques

Keeping track of shares in SHEET using a little trickery and a few graphs

by Steve Litchfield

So far in this series of advanced spreadsheet techniques we've looked at logical and 'lookup' functions, demonstrating them in practical examples that can be used in your day-to-day life.

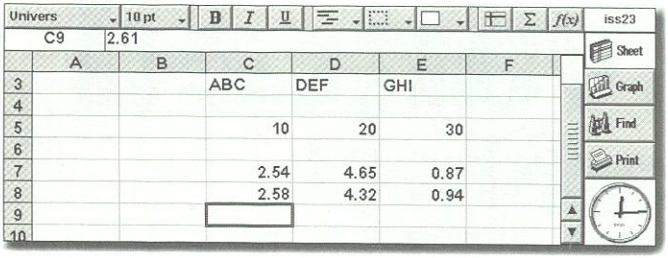
Using them again, but this time adding graphs and ranges as well, we're going to compile a useful spreadsheet for tracking share prices and values. This function is perennially popular, especially in the world of shareware, but there's no reason why a properly constructed spreadsheet can't perform much the same task.

Even better on a Series 3

As with the last tutorial, I'm going to use the Series 5 spreadsheet exclusively, but if you're a Series 3 user you can afford to feel very smug indeed—one of the reasons why I'm using the '5' here is because its SHEET application is in many ways less capable than its predecessor and thus forms a baseline from which Series 3 owners will be able to achieve the same and quite a bit more. Although many of the menu commands and a lot of the interface is different, the additional sorting and range naming functions give scope to create a more ambitious spreadsheet. Follow through the steps here on paper and then see how you get on with the older Psion.

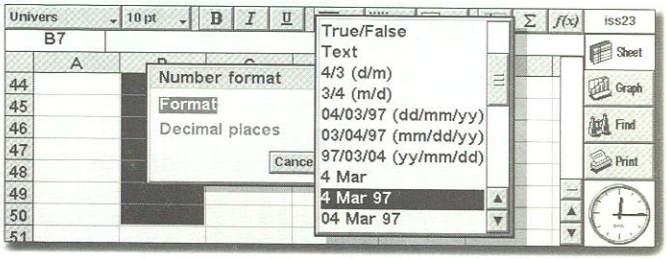
Constructing the spreadsheet

The goal of this example spreadsheet is to calculate the total worth of shares in three mythical companies and to track their performance over a period of time. At first glance this sounds easy enough to achieve—certainly the idea of three columns of share prices, one for each company, is easy to implement. Starting in C3 and moving across, let's list each company that we're interested in, e.g. "ABC", "DEF", etc. C5 to E5 is where we type in the number of shares owned and C7 to E7 downwards can represent the start of the daily or weekly logging of share prices. Rows 4 and 6 will be used shortly, don't worry.



Entering in sample prices

Setting up column B in one of SHEET's date number formats



For each row of share prices, we obviously need the date applicable, so that's B7 and below accounted for. Let's highlight B7 to (say) B50 and format the cells as one of the date number layouts. It's also well worth changing the number format of C4 to E4 and C6 downwards (and across to the right) to 'Currency', ensuring that SHEET puts in the pound, dollar or other currency symbols for us and also regulates the number of decimal places shown.

Some sample data

Make up a few rows of example data for now, so that we've got something to work on. In order to calculate the most up to date worth, we need to multiply the number of each share held by the last known share price. But how exactly do we get SHEET to work with only the most recent entry in the prices column? After all, the cell reference will be different after each update. It would be very inefficient to change our formulae to *tell* it which was the bottom-most entry in the column every time, so what we need is something a little more automatic.

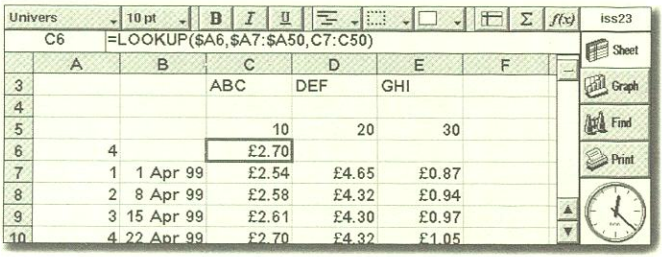
There are several possible solutions, but the one we'll employ here is to use column A to store a sequence of numbers: e.g. 1 for the first share price we jot down, 2 for the second, etc. Enter the number 1 into A7 to start it off. Now it's tempting to use "=A7+1" in cell A8 and then copy this down the column, but we need to be slightly more devious. By altering the formula in A8 to

=IF(B8,A7+1,"")

we're saying that it should only increment the number in the cell above if something exists in the B column cell next to it. Let's copy and paste this formula into a number of the cells beneath A8 (again, we'll go as far as row 50, to give room for expansion).

Thus the sequence of numbers in column A will only go as far as we've got dated share price entries, and it's a simple matter to calculate the

Displaying the last price update automatically, in cell C6



	A	B	C	D	E	F
3			ABC	DEF	GHI	
4						
5			10	20	30	
6	4		£2.70			
7	1	1 Apr 99	£2.54	£4.65	£0.87	
8	2	8 Apr 99	£2.58	£4.32	£0.94	
9	3	15 Apr 99	£2.61	£4.30	£0.97	
10	4	22 Apr 99	£2.70	£4.32	£1.05	

highest number in the column and then read across to see what the share prices are in that row. For the former, enter the following in cell A6:

=MAX(A7:A50)

Take a moment to check that it's giving the largest number in the column, as required.

The rest of the magic starts in cell C6. Here's the formula to type in:

=LOOKUP($A6,$A7:$A50,C7:C50)

How it works

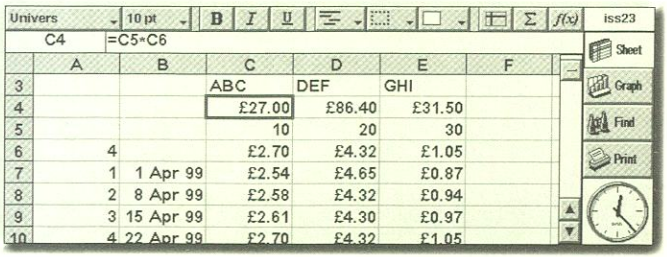
As in previous articles, the easiest way to explain this formula is to talk you through it in plain English. SHEET is to examine the absolute range A7 to A50, looking for the value we've just calculated in absolute cell A6 (the highest share price entry number available). When it finds it, the contents of the matching cell in the range C7 to C50 is used. In this way C6 will always contain the last share price entered, however far down the spreadsheet the original typing was done. The reason we used 'absolute' cell referencing in the formula is because we now need to copy the formula into cells D6 and E6 and I didn't want SHEET to start 'intelligently' altering it to take into account the jumps from column C to D to E. Copy the formula twice now and we should end up with the last known prices for each share in cells C6, D6 and E6.

It just remains to do a simple multiplication. C4 to E4 should be set up as =C5*C6, etc. to calculate the total current worth of each set of shares held.

Before moving on, take a few moments to enter some more days/weeks of sample share prices and convince yourself that you understand how the spreadsheet works.

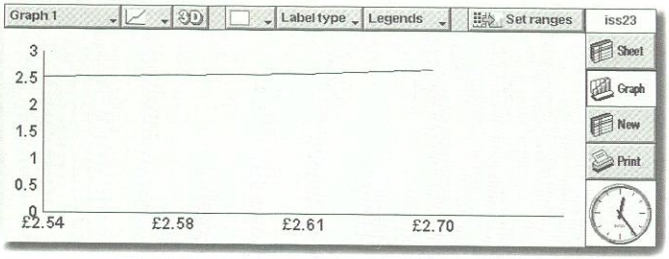
Get graphing!

If your eyes have already started glazing over with all these figures, you'll be doubly glad to



	A	B	C	D	E	F
3			ABC	DEF	GHI	
4			£27.00	£86.40	£31.50	
5			10	20	30	
6	4		£2.70	£4.32	£1.05	
7	1	1 Apr 99	£2.54	£4.65	£0.87	
8	2	8 Apr 99	£2.58	£4.32	£0.94	
9	3	15 Apr 99	£2.61	£4.30	£0.97	
10	4	22 Apr 99	£2.70	£4.32	£1.05	

Calculating total share worth in C4 to E4



The rudimentary graph before we've gone to work in earnest

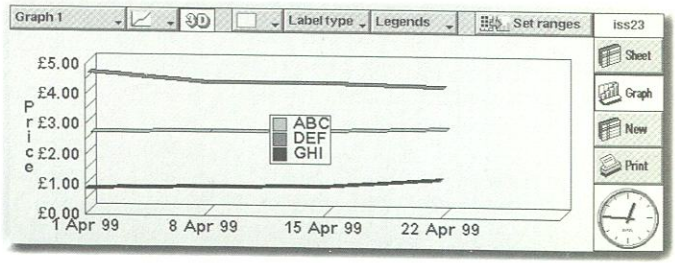
move on to the bit with the graphs. Turning our column of numbers into an easily understood picture is one of the things SHEET excels at. Let's start by highlighting cells C7 downwards, going a few cells beyond the last filled-in price to give ourselves room for expansion in the graph. Tap on the toolbar button 'Graph' or press [Ctrl]-[Q] and SHEET will do its best to display the numbers highlighted, in this case usually with a column graph. Now, share prices are usually plotted as a simple line, so use the top toolbar button to switch the graph's type to 'Line'.

It's normal to spend a while customising the graphs that SHEET comes up with, so don't be disappointed if it doesn't yet look how you imagined it. The most obvious thing wrong is that the 'X-axis' (the horizontal one) is marked in currency rather than date. Instead, it would make more sense to use the dates in column B as our axis labels, so use the 'Format X-axis' command to 'Use labels from' cells B7 downwards (e.g. B7:B12). The Y-axis may also look wrong, but before we tidy that up let's add the rest of our share information to the graph.

In the Series 5's implementation of SHEET, one way of doing this is to switch back to the spreadsheet grid and highlight the next set of share prices (cells D7 and below)—do try to extend the highlight down to the same row number as you did for column C before, to avoid confusion. Once highlighted, we can switch back to the graph and use the 'Add selected range' command. All being well, we should now see a second line appear on the graph, with a different data marker symbol. Switch back to the grid, highlight E7 and below and then back to the graph to repeat the command. Notice that SHEET automatically starts using the next unused data marker symbol in its repertoire for each new range we add.

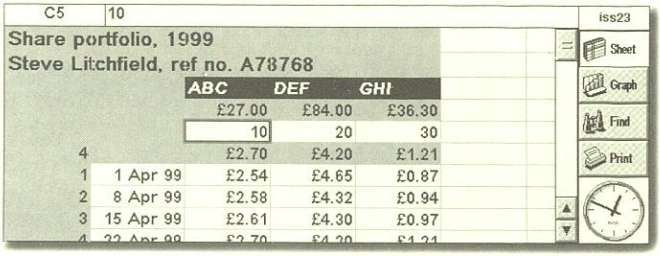
A little make-up

We've managed to get line graphs of our three share histories, but they're fairly spartan. Use the



The share price history graph after only four updates

The main grid after a bit of extra cosmetic work, making the SHEET easier to use



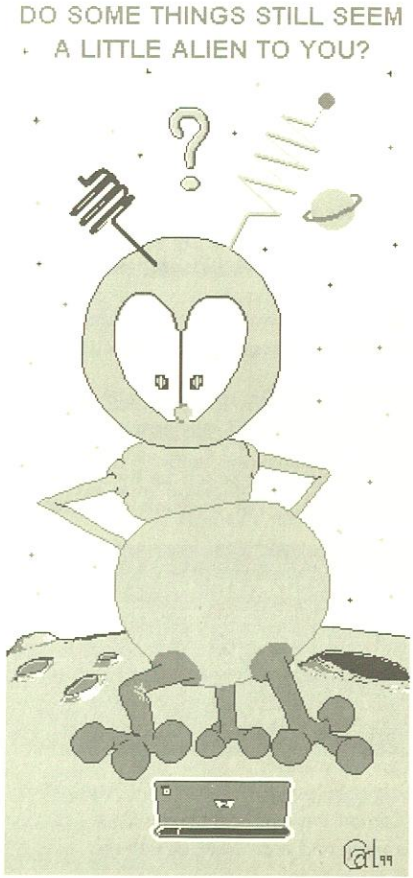
'Format Y-axis' command and set up a suitable title (e.g. 'Price'). While in the dialog, it's worthwhile to browse through the other tabs. On the 'Scale' page, set 'Limit type' to 'Manual lower' and choose zero—we'll let SHEET keep responsibility for auto-scaling the upper limit (after all, our shares will hopefully keep rising in value). On the 'Values' page it's worth setting 'Number format' to 'Currency', so that currency symbols and proper decimal fractions are used.

The final cosmetic enhancement you should make is an important one. Psion didn't just put the big 3D button on the top toolbar for fun—it can make a huge difference to many of the graphs, not least because a 'Line' graph switches from a simplistic set of data markers to an attractive set of patterned three-dimensional ribbons. Why not try it now and see?

Creating a legend...

Under 'Graph settings' you'll also find an option to display 'Legends' in a box at some point on the screen. Try turning it on and you'll note that the three data ranges displayed are referred to rather uninspiringly as 'Range 1', 'Range 2', etc. If only to make the graph clearer, it's worth using the 'Rename range' menu command three times, once for each range. For example, rename 'Range 1' to 'ABC', 'Range 2' to 'DEF', etc.

As the days or weeks march on and you enter price updates, the only changes that will be needed are to use 'Change range' on each range every now and then, extending the cell range mentioned by a few more rows (e.g. changing E7:E13 to E7:E18) to make room on the graph for more share history data.



WIN a FREE 4MB flash SSD or 48MB CompactFlash!!

Whether you're a Series 3a/3c/3mx or Series 5 user, you can expand the capacity of your Psion computer by winning either a Psion 4MB flash SSD or a Simple Technology 48MB CompactFlash—you choose which prize you want.

Just answer the three questions (below), and send your answers on a postcard to Palmtop Publications, PO Box 188, Bicester, Oxfordshire OX6 0GP, ENGLAND.

We can only accept entries by postcard, and all postcards must be clearly labelled COMPETITION 23. Any entries received by means other than postcard will be discarded.

All entries must reach us by 31st May 1999, and the winner will be notified on the following day. The decision of Palmtop Publications is final.

Question 1: What is the name of the suite of OPL routines that lets you calculate Standard Deviation in CALC?

Question 2: What battery type is most susceptible to *memory effect*?

Question 3: What is the name of Psion's new electronic mailing list service?

Last issue's winner: Mr Kenjiro Yoshigasaki,Brussels, BELGIUM
(Correct answers: 1. Infrared Data Association, 2. back one month in day view/back one year in week and year views, 3. none)

Working For a Living
-The Engineer

The latest in our series looking at how Psion palmtops are used in real-life professions

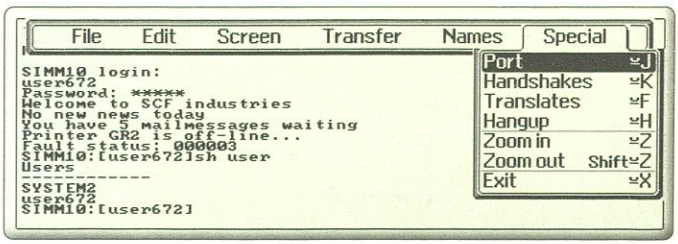
by Steve Litchfield

If there's one group of people to whom the Psion series of palmtops are perfectly suited, it has to be those working in the field of science and technology. Engineers (of all descriptions) don't tend to be phased by keyboards or file concepts, and Psion's halfway house between simple organisers and full-blown laptops is a perfect match to their requirements.

A little of my history

As an engineer in a past life (1983 to 1993) I spent the last two years of my employment reaping the benefits of the original Series 3. Even on such a basic model I was able to pull off feats which astonished many colleagues, mainly using the COMMS application in conjunction with a 3Link serial cable: using a 2400 baud pocket modem to dial into the company mainframe computer (the Series 3 effectively became a VAX terminal) and fix problems while off site. Or using the Psion to control test or debug hardware that had a standard RS232 serial port. Or working on documents (in a text-based mark-up language) on the Series 3 during meetings or journeys and then uploading via *Ymodem* protocol to a local terminal server when back at my desk for printing. Such tasks seem commonplace these days, but back in 1992 they were state of the art. I very soon got used to having a serious computer in my pocket and of course pounced on the Series 3a and every model since, as soon as they became available.

Time has marched on since those pioneering days, but the Psion palmtops are no less useful to the engineer. Plugging into remote computers is still a hot issue, especially when working in the field or between customer sites, but it's more likely to happen on a Series 5, using *Message Suite* to connect to the Internet, or *Hermes* to



Logging into an engineering VAX from home on the Series 3a

'telnet' into a net-connected mainframe. The range of peripherals has greatly expanded too, with GSM phones, infrared modems and printers, character readers and of course desktop computers such as PCs and Macs.

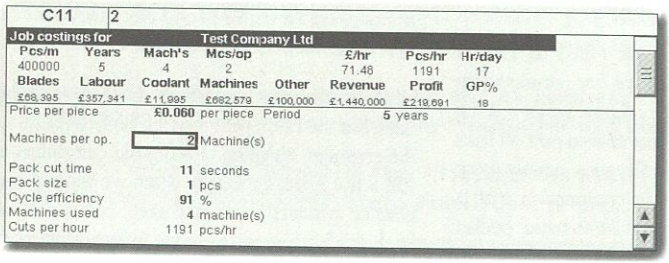
All built in?

Whether a software or hardware engineer, slapdash or Chartered, the organisational facilities of the Psion are a major benefit. AGENDA is as useful as ever, especially the to-do lists for keeping track of projects and deadlines, with WORD and SHEET taking the burden out of keeping track of seminars, events and journals, sometimes essential for professional status. If these built-in applications are not flexible enough, *Plan* or *Notepad* (on both Series 3 and Series 5) have been proven to work for many engineers.

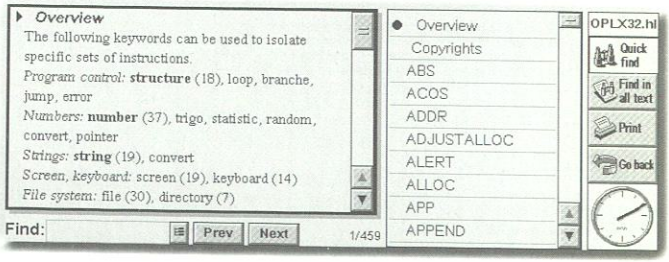
Estimating job costs and timescales is another job that SHEET handles well: being able to give a quote to a customer on the spot gives the instant advantage of seeing the body language and knowing whether too much (or too little) has been asked. One of my engineer friends has a job quotation spreadsheet which works on Series 3, Series 5 or PC and which involves three critical calculations, four lookup tables, three pages of formulae and a specification input page. Ambitious, but effective—see also the advanced SHEET tutorials, started in issue 21, for help and ideas in making SHEET work as well for you.

Information overload

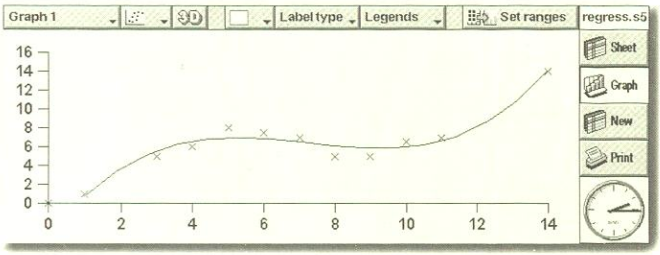
Working with technology usually necessitates two things: large amounts of reference information (manuals, specifications, look-up tables, etc.) and lots of data, calculations, etc. (often specific to the industry or company in question). The former is handled admirably by DATA or an etext reader (e.g. *eTxtRead* or *Vreader5*—see page 52), each allowing many hundreds of kilobytes of raw information to be easily searched in seconds on the Psion.



Preparing a job quotation in SHEET



A technical manual (OPL) kept to hand in DATA form



SHEET makes a good data handling and calculation tool

The latter requirement, that of handling data and performing highly complicated calculations while out and about, can be tackled in three ways:

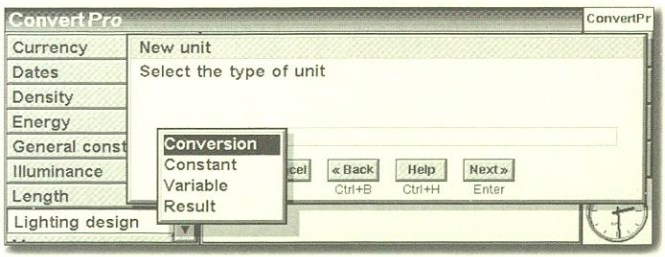
- A SHEET file can be created with space for the data and the formulae needed coded into the columns and rows. This is extremely quick to set up and has the advantages that, once typed in initially, the calculation formulae can be easily copied onto new rows, and that a convenient graph plotting system for any calculation results is never more than a keypress away.

- A simple OPL program can be written, with perhaps a simple dialog to request the numbers to be input into the calculations and another to report the results. Although this approach takes more time to set up, the possibilities of sprucing up the program for use by less knowledgeable Psion-owning colleagues is very enticing. If the industry is large enough, there may even be a market for new calculators (e.g. applications exist to calculate such esoteric things as cable sizes, cross-section properties or welding times).

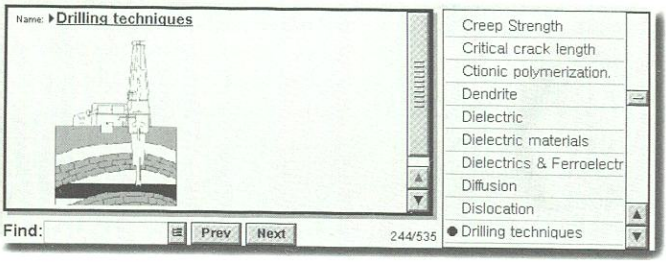
- If the calculation is straightforward enough, a third party conversion utility such as the freeware *ConvertPro* on the Series 5 is an excellent choice. By creating a new 'conversion' and giving it the appropriate constants, engineering calculations can be integrated into a specific engineering category within the general-purpose ConvertPro system.

Illustrations

Although it's possible to create genuine engineering drawings with programs like *Vector* on the Series 3 or *P5CAD* on the Series 5, the most practical use of engineering graphics will be inside DATA files, perhaps as illustrations of components or procedures. Most PC-based CAD systems will happily export into Windows BMP format, from which PsiWin will create a SKETCH file on the Series 5 that can be copied into a suitable object in a database record. Series 3 owners



Working with a new 'Lighting design' category in ConvertPro



An example database record with inserted SKETCH illustration

would be limited here to standalone PIC format pictures, created using a tool like *WSPCX* (see issue 20, p90).

Series 3, the engineer's friend

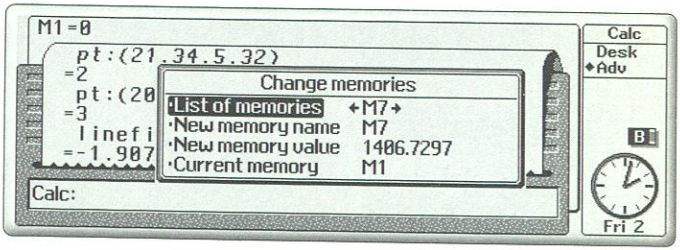
Sometimes an engineer's dedication to duty extends to creating far more than just simple OPL routines. For example, the Series 3 can be used to replace existing graphical and scientific calculators: *Graph3a* offers cartesian, polar and parametric graph types, with equations entered exactly as they appear on paper. *Calc3a* is a large scientific calculation and equation solving program, now made freeware. If needs are somewhat simpler, there's *CalcLR*, a small set of OPL routines that can be called directly from the built-in CALC application, calculating lines of best fit and standard deviations.

Applications can be extremely diverse. *Callsman* is a Godsend for service engineers, with relational customer, part and call status databases. *Periodic* and *Elements* are both periodic tables of the elements, useful especially for chemical engineers. And *TV&VCR* is a database of common faults and fixes for TV and video recorders, designed to aid the repair engineer.

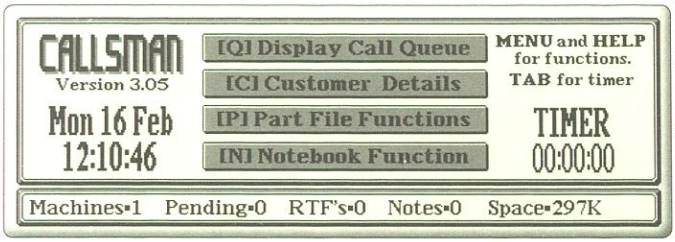
Converting between different modern-day scientific units is such a popular need and subject for programmers that there are a multitude of fairly similar utilities available. In addition to free spreadsheets that will do the same job, applications like (Tim Bentinck's) *Convert* and *JWIN* lead the way, though none approach the sophistication and flexibility of *ConvertPro*, referred to earlier.

EPOC lends a hand

Turning to the Series 5, there are some equally varied offerings. *RadCalc* calculates the maximum range at which a given signal-to-noise ratio can be achieved by a radar of specified parameters. *ResCodes* takes resistor colour bands and converts them into resistance figures. *ChemTools* is a huge package, designed for any engineers who have to deal with materials at the molecular level, offering not just a periodic table but

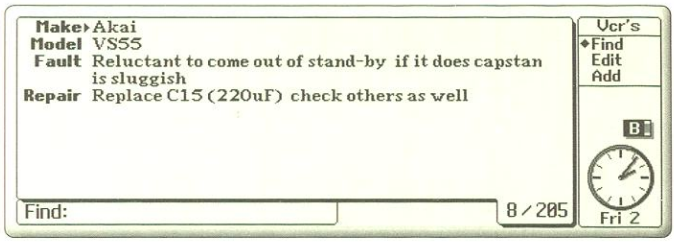


Reviewing CalcLR-calculated line fit coefficients in CALC



Keeping a close eye on the repair business in Callsman

An entry in one part of the TV&VCR database system



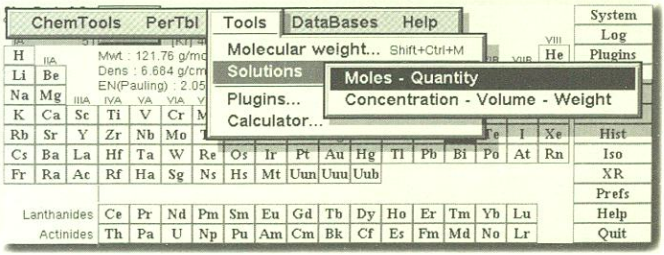
massive detail on each element and a tool for calculating the molecular weight of molecules and macromolecules.

Statistics is an analysis tool that goes well beyond the statistical formulae built into SHEET (though note that on the *PocketInfo* web site there are some surprisingly capable analytical spreadsheets). *Grapher* aims to provide comprehensive graph drawing functions, with up to eight overlaid cartesian, polar or parametric graphs allowed on-screen at the same time.

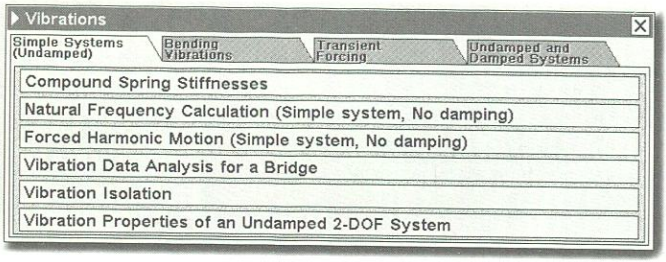
Lastly, *ETools* is a shell around a suite of engineering tools. Included in the first version are 42 different stress and vibration calculations, plus general areas for algebra, statistics and differential calculus.

Ask around!

These programs are just an overview of what's available. If *you* have a specific engineering need, for either Psion machine, the two first places to try are the *comp.sys.psion.misc* Internet newsgroup and the *www.pocketinfo.org* web site. The chances are that someone else in the same line of work as yourself has got there before you.



Just some of the many functions of ChemTools


Vibrations
Simple Systems (Undamped)
Bending Vibrations
Transient Forcing
Undamped and Damped Systems
Compound Spring Stiffnesses
Natural Frequency Calculation (Simple system, No damping)
Forced Harmonic Motion (Simple system, No damping)
Vibration Data Analysis for a Bridge
Vibration Isolation
Vibration Properties of an Undamped 2-DOF System

ETools offers a large number of specialised calculations

In researching this article, my thanks go to members of the Palmtop staff, plus David Humble, Kevin Golding, John Ash and Mark Fleeming.

Software availability

Most items available from the usual shareware sources, plus:

Message Suite - all *Palmtop* CDs

Hermes (telnet version) - CD07 onwards

Plan - all CDs

Notepad Deluxe - Purple Software

eTxtRead - all CDs

VReader5 - CD05 onwards

ConvertPro - CD04 onwards

Vector - all CDs

P5CAD - CD07 onwards (to avoid date crippling)

WSPCX - all CDs

Graph3a - all CDs

Calc3a - all CDs

CalcLR - all CDs

Callsman - CD02 onwards

Periodic - all CDs

Elements - all CDs

TV&VCR - all CDs

Convert - all CDs

JWIN - CD03 onwards

RadCalc - CD05 onwards

ResCodes - CD03 onwards

ChemTools - CD03 onwards

ETools - CD07 onwards

Statistics - CD02 onwards

Grapher - CD03 onwards

ETools - CD07 onwards

THREE for all

John Woodthorpe examines some highlights from the Series 3 world

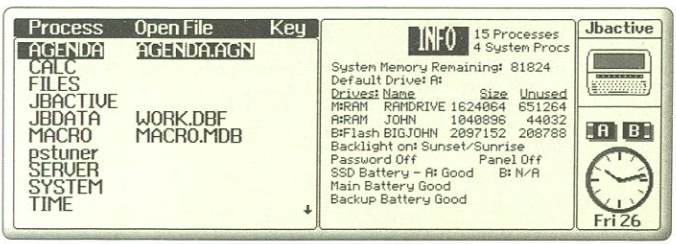
There's no doubt that the launch of the Series 3mx gave a boost to several software packages. Some that were a little unresponsive on the older machines are totally transformed by the extra speed, and just about everything has benefitted from the faster processor. It has also provided a reminder to those who'd moved to the Series 5 that there are some very desirable applications available for the Series 3 that still have no equivalent. Three that come to my mind are *JBActive*, *TopiX*, and *PSTuner*. All are very different, but I find each one to be very useful and generally underrated.

JB Who?

If you're new to Psion machines, you may not be aware that any application that starts with the two letters "JB" is likely to have been written by John Boyce and to be very well worth investigating. *JBActive* was relatively late in appearing compared to some of the JB classics like *JBData* and *JBLaunch*, but for me it has become the key Series 3 'Control Panel' application. It provides a wide range of extra functionality based around a list of open applications and other useful information on the status of your Psion.

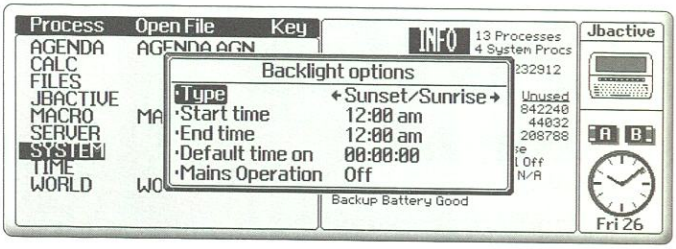
The main display shows the amount of free memory, status of all the batteries, and usage of each drive. You can also press the diamond key to display some rather more esoteric information on the applications running, but that's of more interest to programmers than the average user.

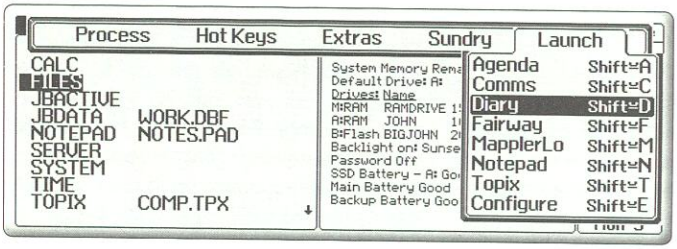
The more general user will appreciate touches like setting the backlight to come on automatically when the machine is switched on between the hours of sunset and sunrise, assigning hotkeys to switch between the



Lots of useful system information—John Boyce's excellent JBActive

Take command of your backlight (if you've got one)





JBActive as a program launcher

open applications, and others to launch applications with specific files. That means that if you regularly use several WORD and SHEET files, along with a Notepad Deluxe file, then each can be launched directly from JBActive.

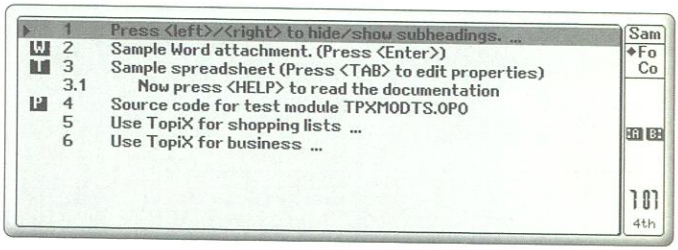
There's lots more there, but it can be set up to act as the 'glue' that holds together all the commonly-used functions of the machine. Everyone has their own favourite application that they consider useful enough to have been included in the ROM of the Series 3 machines, and JBActive is my personal candidate.

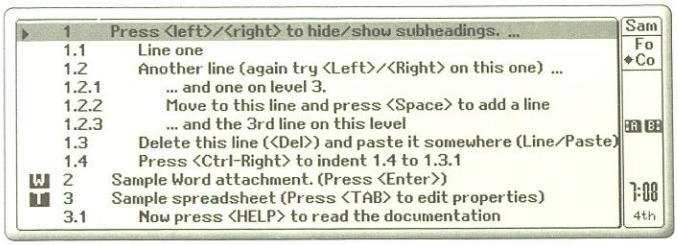
TopiX

I'm not really sure how many people realise just how good Uwe Kallmeyer's *TopiX* application really is. Along with Notepad Deluxe and Plan, it was always my mainstay on the Series 3a, and is even better with the extra speed of the 3mx. TopiX is an outliner that allows you to enter ideas as headings, expanding them to deeper and deeper levels later on. If you need to get some thoughts down, and then build minor themes into them to flesh them out when you have more time, then this is ideal.

Anyone who's used outliners on other platforms, e.g. PC Outline, will be familiar with the idea of expanding and collapsing outlines.

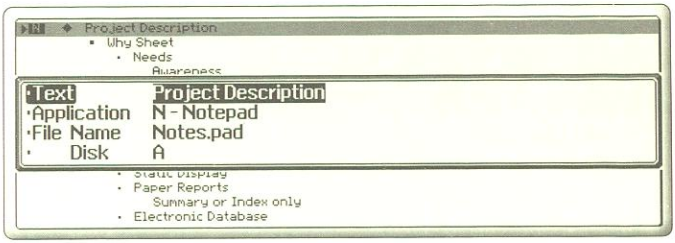
TopiX's 'collapsed' view


1 Press <left>/<right> to hide/show subheadings. ...
W 2 Sample Word attachment. (Press <Enter>)
T 3 Sample spreadsheet (Press <TAB> to edit properties)
3.1 Now press <HELP> to read the documentation
P 4 Source code for test module TPXMODTS.OPO
5 Use TopiX for shopping lists ...
6 Use TopiX for business ...
Sam
Fo
Co
4th



The 'expanded' view in TopiX

Linking to another application



Of course some of that functionality is present in Psion's WORD, allowing you to set headings to be visible in some views and not in others, but TopiX goes further in that you can expand and collapse *individual* sections, launching other files and applications from specific items. It's this extra feature that takes it into a different league to anything else on the Series 3, linking those ideas into larger notes, reports, spreadsheets, etc.

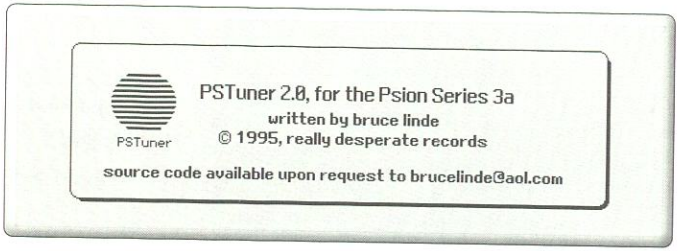
I've always maintained that TopiX is an ideal partner to Notepad Deluxe in this respect. For me, TopiX handles the "Get these thoughts down before I forget them" situation much better than anything else, as it makes it possible to see the scope of the whole plan. Topics can be promoted, demoted, and moved around in the outline. When I've got something I'm happy with, I then use the export facility to take everything from TopiX to Notepad to monitor events more closely and track them as they happen. In fact, I have even linked straight from TopiX to Notepad and then to Plan for more complex projects as they have gone through various refinements and rewrites before the work actually started.

There have been no new versions of TopiX for a few years now, and I did wonder if that meant it was no longer supported. Consequently I got in touch with the author by email (*kallmeyer@h.dahm.de*) and am delighted that he is still interested in it, and is willing to give registered users access to the source code if they wish to develop it further.

Personally, I'd love to see TopiX turn up on the Series 5, as there's still nothing with quite the same simplicity and utility on that platform. Going back to it on the 3mx from time to time, I realise just how elegant and useful an idea processor it really is.

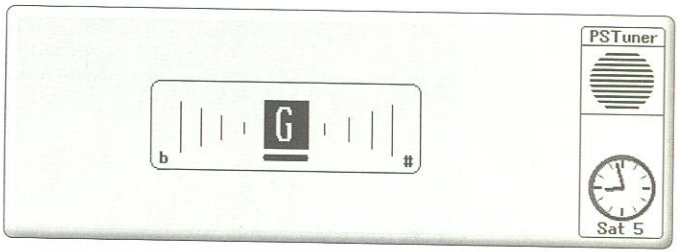
PSTuner

A rather more specialised program that's only of interest to musicians, I found this software instrument tuner several years ago. I was really impressed with the idea of doing something very different with the Psion's sound


PSTuner 2.0, for the Psion Series 3a
written by bruce linde
© 1995, really desperate records
PSTuner
source code available upon request to brucelinde@aol.com

PSTuner—computerised instrument tuning

Homing in on a perfect G



system. When I discovered that the author, Bruce Linde, is a fellow bass guitarist (needless to say, somewhat better than I am as he gets paid to play) I felt even more interest in it. It works by listening to the note being played and displaying a moving bar to indicate how close it is in pitch to the nearest 'real' note.

I first used it on my 3a, where it *did* work, but was very slow. With the extra processing power of the 3mx it has improved greatly, although I still wouldn't describe it as sprightly. It takes a little bit of practice to get the best out of it. In particular, you need to have a clean steady note for it to listen to, with as little extraneous noise as you can arrange. For stringed instruments it works best on harmonics rather than with a normally plucked note, with a few seconds to settle to the right value. Despite that, I've found it extremely useful and very accurate.

It also has the best disclaimer of any application I've seen, namely that the author is not responsible for out-of-tune performances arising from using it!

Software availability

JBActive is freeware, available from:

www.compulink.co.uk/~jbsoft/index.htm

TopiX is fully functioning shareware (£15 registration fee) with a small amount of nagging, available from:

3lib.ukonline.co.uk/topix.htm

PSTuner is fully functioning shareware (registration fee is a charitable donation made via the author), available from:

www.songwriter.com/nlom/nhome.html

With or without you

Keeping your PDA personal, productive and protected

by Roger Pemburton

I used to have a friend with a Psion 3a. Well, he's still my friend, but alas is no longer a Psion owner. And it wasn't a case of being seduced away by other technology. Having persuaded him to get organised with his first Psion, he was so protective of the new toy that he used to keep it wrapped up in his bedroom outside of working hours, fearing that it would get damaged if he took it with him at weekends or when socialising.

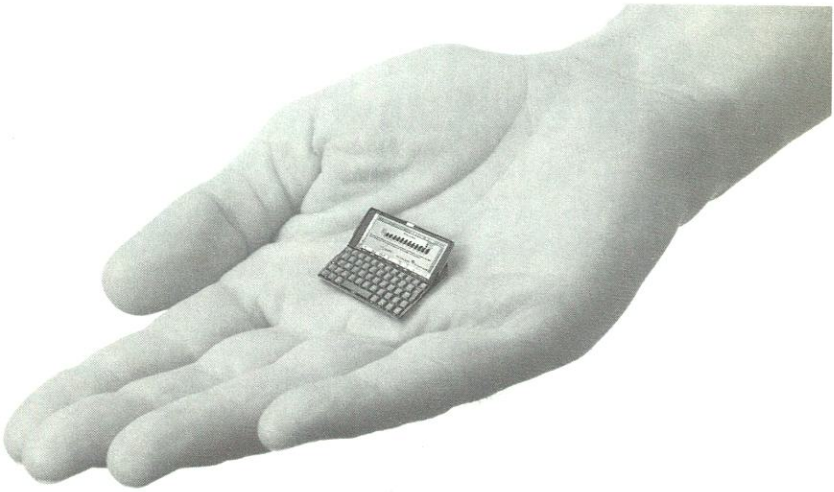
But then his house was burgled one day while he was shopping. And *yes*, they took the 3a. The insurance company stumped up for a new one, but six months later he let a stranger stay the night, who took rather more advantage of his hospitality than he'd intended, removing the replacement Psion when they left. Disillusioned by how easy it appeared to be to lose his palmtop computer, my friend then reverted to pencil and paper.

The moral of this little tale? Well, a Psion is first and foremost a Personal Digital Assistant (PDA), designed to let you manage your diary, contacts, expenses and notes. What on earth is the point of setting it up with all the information you need for day to day life and then leaving it at home/in the car/office? Surely a Psion has to be kept on your person (or at least in your briefcase or handbag) to be worth having at all? If my friend had kept the 3a with him, its loss on both occasions would have been avoided.

Are Psion owners immune to real-life misfortunes? Of course not, but it's my fervent hope that should my own house be burgled I'd have all the contacts, reference numbers and emergency information in my PDA to help rebuild my life as quickly as possible. After all, the 'A' in the acronym does stand for 'Assistant'.

Close at hand

Take a moment to think of some of the other benefits of having a Psion that's *always* with you. Inspired thoughts will no longer have to wait until you get back to the car, alarms will never go off on your office desk in your absence and financial transactions can be recorded instantly without having to risk assigning them to memory for five minutes until you reach your palmtop. A few years ago, you might perhaps have been put off by the social stigma of opening up your Psion in public, but I'd venture that society has



changed. Few people will give a second glance to the use of a PDA, phone or notebook computer in a shopping centre or on a train.

Being able to count on having your Psion on your person at all times dramatically transforms how it's used. A desk-bound PC is a great tool for a hundred and one jobs. A notebook computer is a reasonable compromise between mobility and power, but it's still a *dumb* computer. A Psion on your hip or in your inside pocket is a second *brain*, even more useful as the years move on and the original brain starts to wear out.

The difference between having to spend a few minutes unpacking and setting up a notebook computer and taking two seconds to flip open a Psion and start typing is enormous. As with the cowboys of old who strapped on their 'toys' each morning, how fast you are on the draw really does make a huge difference to how effective it is. By all means cosset your palmtop inside foam, leather or plastic, but don't sacrifice ease of access for the ultimate in protection—if it takes ages to extract it when you need it, you'll quickly get out of the habit.

Password fever

The same applies to the Psion power-on password, illustrated by another friend of mine, who popped in yesterday. "I've stopped using my Psion", he confessed. When asked why, he complained that it was all too much of a bother entering information on it. The reason wasn't hard to spot after switching the Series 5 on. In a bid to be as safe and secure as possible, he'd set up a machine password. Nothing wrong with that, but the owner screen (and password) was set to come on *every* time the Psion was activated. Worse still, the password was a full 10 characters long. Memorable, perhaps, but completely impractical to type in just to gain access to your Psion at a moment's notice.

The best compromise for most of us is to set a short but difficult-to-guess password (e.g. a PIN number or set of initials) and then to set the screen to come on only once a day. Anything more involved than this may ultimately lead to your PDA becoming your **P**almtop, **D**isused, **A**voided.

A beginners' guide to PROGRAMMING your Psion

Part two of our easy introduction to programming. In this instalment Leigh talks about variables

by Leigh Edwards

OPL allows for four *types* of variable. One for small whole numbers (*Integer*), one for very large whole numbers (*Long Integer*), one for non-whole numbers (*Floating Point*) and another to hold text (*String*). To tell OPL what type a particular variable is supposed to be, a special character is added to the end of the variable name. For example:

```
LOCAL count%          REM % for Integers
LOCAL bigcnt&         REM & for Long Integers
LOCAL vatrate         REM   Floating point by default
LOCAL myname$(12)     REM $ for Strings
```

Integer variables can have values ranging from -32768 to +32767. Long Integers may have values ±2147483647. For non-whole numbers (for example 1.175) use a floating point type. Note that floating-point variables do not have a 'type' symbol on the end of their name. For very large whole numbers (i.e. outside the long integer range) you should also use a floating-point type. On SIBO machines, floating-point variables can handle numbers as big as ±9.999999e99 and as small as ±1e-99. On EPOC systems, floating-point numbers in the range 2.225074e-308 to 1.797693e+308 are possible. Exponential notation is often used for very large or very small numbers. Use E (capital or lower case) to mean "times ten to the power of", for example: 3.14E7 is 3.14×10^7 (31,400,000), while 1E-9 is 1×10^{-9} (0.000000001).

Giving any numeric variable a value outside the range for its type will generate an 'Overflow' error message.

String variables have a $ symbol on the end and are used for text and other displayable characters (up to 255 characters in length), e.g. "Press a key to continue".

To declare a string variable, you must follow the $ symbol with the maximum length of the string in brackets. So if you want to store names up to 12 characters long in the variable animal$, declare it like this:

```
LOCAL animal$(12)
```

A 'String too long' error occurs when you try to assign too many characters to a string, e.g. animal$ = "Tyrannosaurus Rex".

Grouping variables

You may want to create a group of related variables, for example to store a list of values. Instead of having to declare many separate variables, e.g. a, b, c, d and e, you can declare an *array* of variables, e.g. a%(1) to a%(5) in one go:

```
LOCAL a%(5)    REM an array of 5 integer numbers
or
LOCAL a&(5)    REM an array of 5 long integer numbers
or
LOCAL a(5)     REM an array of 5 floating point numbers
```

The number in brackets is the number of elements in the array. So LOCAL a%(5) creates five integer variables: a%(1), a%(2), a%(3), a%(4) and a%(5). With strings, the second number in the brackets specifies the maximum length of each of the strings. For example:

```
LOCAL a$(5,8) REM an array of 5 strings of 8 characters maximum
```

All the elements in the string array have the same capacity; the example above allocates memory space for five strings, each up to 8 characters in length (OPL does not support two-dimensional arrays).

All numeric variables are given zero as their initial value. String variables start with no characters in them (a null or empty string). Every element in an array declaration is also initialised appropriately.

Variable names

To make it easier to understand your programs when you read through them at a later date, use variable names that describe the values they hold. For example, in a procedure that calculates tax, you might use variables with names such as taxrate, lesstax and plustax.

- Variable names may have any combination of upper and lower case letters. TaxRate and taxRATE would be considered the same name.
- Variables must not use the same name as any of the OPL keywords—if you use these you will see a 'Declaration error' message when you translate your program.
- Variable names may be up to 32 characters long on EPOC systems and 8 characters on SIBO (including the $, & and % symbols).

- Names must start with an alphabetic character (plus the option of the underscore character on EPOC), but after that may use any combination of numbers and letters.

Example declarations

- LOCAL product$(20),z&(3) declares one string variable, product$, of capacity 20 characters, and one long integer array variable containing three elements, z&(1), z&(2) and z&(3).
- LOCAL AGE%,B5$(10),i declares one integer variable, AGE%, one string variable, B5$, of capacity 10 characters, and one floating-point variable, i.
- LOCAL profit declares one floating-point variable, profit.
- LOCAL x,MAN6$(4,7) declares one floating-point variable, x, and one string array variable, man6$, containing four elements, man6$(1), man6$(2), man6$(3) and man6$(4), each of capacity 7 characters.

Variable selection

- Integer variables use less memory than long integer variables, and both use less than floating-point.
- Integer variables are processed much faster than floating-point. Always use an appropriate integer for numeric data unless you cannot avoid it.

Giving values to variables

You can assign a value to a variable directly, like this:

```
X% = 5
```

or

```
y = 10.21
```

String variables can be assigned text values like this:

```
a$ = "a text message"
```

The text must be enclosed inside double quote characters.

If you declare an array such as a%(4), you can assign values to each of the elements in the array like this: a%(1)=56, a%(2)=345 and so on. Similarly for the other variable types: a(1)=0.0346, a&(3)=355440, a$(10)="name".

Arithmetic operations

You can use these *operators*:

+	plus
-	minus (or 'make negative')
/	divide
*	multiply
**	raise to a power
%	percentage

In OPL the operators above have a 'precedence order'. For example, 3+51.3/8 is treated as 3+(51.3/8), not (3+51.3)/8. And 7+3*4 will return 19, not 40. (3 is first multiplied by 4, and 7 is added to the result). To ensure operators are used in the correct sequence and precedence, you should consider using brackets around sections of your calculation. The sections of the expression within the innermost brackets are done first. For example, in the following calculation:

```
result = 17.43 + ((22/7) + 4)
```

The result of 22 divided by 7 is added to 4, and then that total is finally added to 17.43.

Expressions

You can assign a value to a variable with an *expression*—that is, a combination of numbers, variables, and functions. For example:

```
z = x + y/2
```

gives z the value of x plus the value of y/2.

```
z = x * y + 34.78
```

gives z the value of x times y, plus 34.78.

```
z = x + COS(y)
```

gives z the value of x plus the cosine of y.

COS is another OPL function. Unlike the GET function, COS requires a value or variable to work with. As you can see, you put this in brackets, after the function name. Values you give to functions in this way are called *arguments* to the function. All of the above are operations using the variables x and y, assigning the result to z and not affecting the value of x or y.

Methods of changing the values of variables fall into these groups:

► Arithmetic operations, such as multiplication or addition, for example:

```
z = sales + costs or z = y%*(4 - x%)
```

► Using one of the OPL functions, for example:

```
z = SIN(PI/6)
```

or

► Using certain keywords like INPUT or EDIT that wait for you to type in values from the keyboard (actually, using a dialog is much better, but more on that in later articles).

Variable self-reference

In expressions, variables often refer to themselves. For example:

```
z% = z%+1      REM make z% one greater than its current value
x% = x%/4+y    REM make x% 1/4 of its current value, plus the
               REM value of y
```

Constants

In an OPL program, fixed numbers and strings of known characters are sometimes called *constants*. In practice, you will use constants without thinking about them. Here are some examples:

```
x = 0.32
x% = 569
x& = 32768
x$ = "string"
x(1) = 4.87
```

In EPOC, the CONST command may also be used to declare constants. This makes it possible to assign a name to a constant value so it may be used throughout the program without fear of accidental alteration. For example, CONST x=5.0.

Using integers correctly

When calculating an expression or part thereof, OPL uses the simplest arithmetic possible for the numbers involved. If all of the numbers are integers, integer arithmetic is used; if one is outside integer range but within long integer range then long integer arithmetic is used; if any of the numbers are not whole numbers or are outside long integer range, floating-point arithmetic is used.

This has the benefit of maximising speed, but you must beware of calculations going out of the range of the type of arithmetic used. For example, in x=200*300, both 200 and 300 are integers, so integer arithmetic is used for speed (even though x is a floating-point variable). However, the result (60000) cannot be calculated because it is outside integer range (-32768 to 32767), so an 'Overflow error' is produced.

You can get around this by using the INT function, which turns an integer into a long integer, without changing its value. If you rewrite the previous example as x=INT(200)*300, OPL has to use long integer arithmetic, and can therefore give the correct result (60000).

Integer arithmetic uses whole numbers only, e.g. if y% is 7 and x% is 4, y%/x% gives 1. However, you can use the INTF function to convert an integer or long integer into a floating point number, forcing floating point arithmetic to be used. For example, INTF(y%)/x% gives 1.75. This rule applies to each part of an expression, e.g. 1.0+2/4 works out as 1.0+0 (=1.0), while 1+2.0/4 works out as 1+0.5 (=1.5).

If one of the integers in an all-integer calculation is a constant, you can write it as a floating-point number instead. Thus 7/4 gives 1, but 7/4.0 will give 1.75, i.e. OPL sees the decimal point and switches to floating point arithmetic automatically.

Using floating-point numbers correctly

One problem with floating point variables is that the testing of values may not be totally predictable and reliable. For example, doing a test with the IF keyword such as: IF x = 1.0 may not behave as you expect. The result of the expression that changed the value of x may have resulted in the calculated value being something like 0.99998, which will fail the test since it is not exactly equal to 1. Use integers (or integer conversion) in this type of situation unless you absolutely cannot avoid it. If you must use floating point variables, use the 'less than' and 'greater than' operators, e.g. IF x>0.999 AND x<1.001.

Simple operations on strings

If a$ is "OPL " and b$ is "program", then the statement c$=a$+b$ means c$ becomes "OPL program". Alternatively, you could give c$ the same value with the statement c$= "OPL "+"program".

When adding strings together, the result must not be longer than the maximum length you declared previously, e.g. if you declared LOCAL a$(12) then a$= "Palmtop "+"magazine" would cause a 'String is too long' error to be displayed.

Most operators do not work on strings. You cannot, for example, refer to the fourth character in a$(12) as a$(4). To manipulate sections of strings, special functions like MID$, LEFT$ and RIGHT$, are used. These functions will be explained in detail in future articles.

In the next instalment I'll put the final touches to variables and move on to using procedures, arguments and *return values*.

Working with AGENDA

The second part of a new tutorial series aimed at the relative novice

by Steve Clack

In the last instalment we looked at the basic mechanics behind each of the AGENDA views on both Series 3 and Series 5 machines, together with some general advice on how to get the most from this kind of time management aid.

We'll now start to look at how AGENDA can be customised to suit your own personal preferences, thus making it easier and more pleasant to use.

Day view

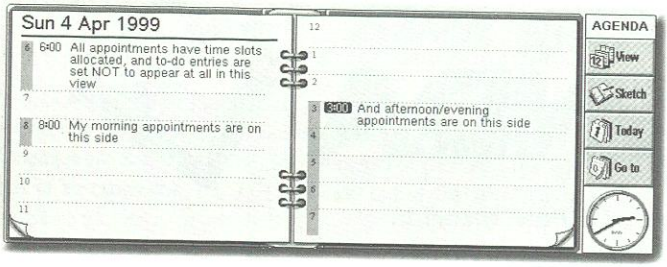
Both Series 3 and Series 5 machines allow considerable flexibility in the way this view is presented. On both machine types the Day view shows two virtual 'pages' of a diary on screen, and you can independently set what you wish to be displayed on each side.

As an example, you may decide that you prefer the day view to display all timed appointments for the morning on the left side, and all afternoon/evening appointments on the right. Alternatively, you can elect to squeeze all the timed entries into the right hand page, keeping the left side free for untimed entries and today's to-do items. There are many possible combinations here, and navigating the options can be a little bewildering to the beginner. Here are some guidelines:

- Firstly, you need to decide which entries should be set to appear in the day view. Remember that this is the view you'll probably be using more than any of the others, just as you would keep a paper diary open at today's page. If your days tend to be comprised mainly of timed events (such as meetings) then you may prefer to configure both sides of the Day view screen to show timed entries, perhaps one side for the morning and another for the afternoon. If your day is driven more by dated to-dos then it may be better to keep one side reserved for to-dos only, rather than have them jumbled up with timed appointments.

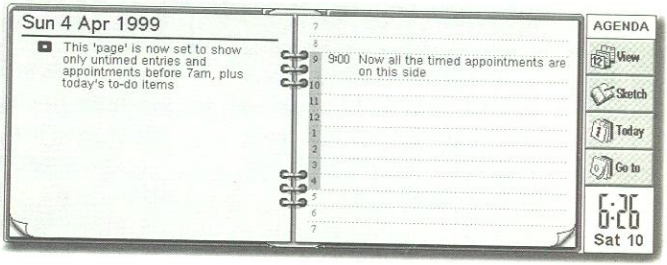
- If you do set pages for timed entries, don't forget to adjust the time slots to suit your active hours. If you work from 9am-5pm there's probably little point in starting the timed entries at 6am. Conversely, if you're a night owl with a lot of social events in the evening, you may wish to take your time slots right up to 11pm or beyond. Remember that unlike a paper diary, you can adjust AGENDA's displays to suit *you*.

- If you have a Series 3 machine, it's worth noting that no event can be set to span across midnight. There's no real workaround to this annoying omission, other than to split such nocturnal events into two portions: one that runs until midnight, and another that


Sun 4 Apr 1999
6:00 All appointments have time slots allocated, and to-do entries are set NOT to appear at all in this view
8:00 My morning appointments are on this side
And afternoon/evening appointments are on this side
AGENDA
View
Sketch
Today
Go to

AGENDA's Day view configured with morning time slots on the left, afternoon/ evening to the right

And with all timed entries squeezed into the right hand 'page', and to-dos on the left


Sun 4 Apr 1999
This 'page' is now set to show only untimed entries and appointments before 7am, plus today's to-do items
9:00 Now all the timed appointments are on this side
AGENDA
View
Sketch
Today
Go to
Sat 10

continues from midnight until the end of the event.

Setting the slots

In order to configure the Day view, take the following steps:

Series 3

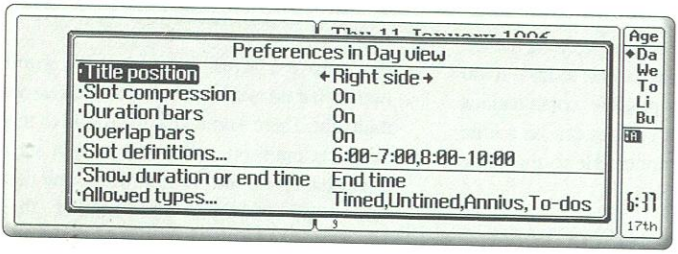
Go into the Day view, and press [Psion]-[Q] to 'Set preferences...', then [Psion]-[D] to go to the 'Day view' preferences.

The first line of the dialog, 'Title position', simply governs which side of the screen the date display will appear in. Select the side that's likely to be least crowded with your entries—on busy days you'll need all the space you can get.

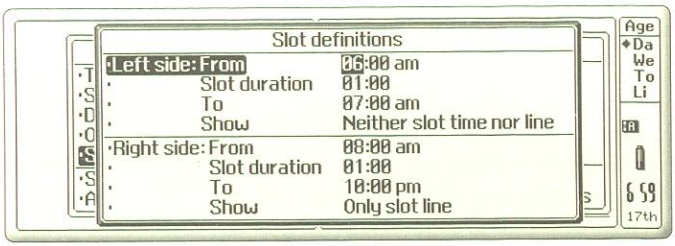
'Slot compression' allows AGENDA to allocate extra lines for larger text entries or longer appointments, automatically reducing the size of empty time slots. It's generally preferable to turn slot compression on.

'Duration bars' will put a narrow vertical grey strip next to timed entries, to show their duration (as shown in both screen shots opposite).

'Overlap bars' will change the duration bars to black wherever two timed entries overlap. This



A myriad of options—ready to set Day view preferences on a Series 3



Adjusting slot definitions on the Series 3

gives an instant reminder that you have two clashing appointments, and is best left on.

Pressing [Tab] while on the 'Slot definitions' line will bring up a secondary dialog where you configure which time periods appear in each side of the Day view. Set the two sides for the time periods you require—if you want to use one side of the display to show untimed to-dos rather than timed entries, just set the slot times for that side to be outside your normal working day. In other words, if your timed entries don't usually start before 7am, then set the your to-do side to run from 6am-7am. By setting the 'Show' line to 'Neither slot time nor line' you'll be left with a blank page that will house all your untimed to-dos. Setting the 'Show' line to 'Slot time' and/or 'Slot line' controls whether the start time of each slot is displayed, together with horizontal dividing lines between each slot. Experiment with these settings until you find the combination that works best for you.

The 'Show duration or end time' line controls whether the duration (such as '1hr') or the end time (such as '➡4pm') are displayed in brackets at the end of each entry. By all means experiment with this, but remember that the more you show in each view the more cluttered it will become.

The bottom line of this dialog, 'Allowed types...', is the key to configuring your day view. Press [Tab] on this line to bring up the 'Entry types allowed in Day view', then choose which entries will show through into the Day view. Timed entries (sensibly) cannot be disabled in this view, but you can select whether untimed entries, anniversaries and to-dos will appear.

If your days are generally full of appointments you may wish to exclude anniversaries and/or to-dos from the Day view. If so, you'll have to move to these specific views whenever you want to review their contents. If you've set one side of the display without time slots, you may wish to show any or all of the three optional types on that side.

To control where untimed entries will appear in the Day view, go into it, press [Psion]-[Q] to 'Set preferences...', then [Shift]-[Psion]-[D] to go to the 'Day entry defaults' dialog. From here you can set the 'Default position for untimed entries'. If using one side of the display for these entries as described above, be sure that the time you set here matches the slot times you set for that side.

To control whether or not to-dos will appear (and where) press [Psion]-[U] in the Day view to go to 'To-do list settings', and set 'Display entries in Day view' to 'Yes'. Set 'Default position in day view' to suit your particular configuration, as described for untimed entries in the last paragraph.

AGENDA on the Series 3 includes a number of useful features that don't appear on the Series 5 (at least in Series 5 ROM versions 1.01 and below). One of the most useful is the ability to choose which to-dos appear in other views. By entering a number from 1-9 in the 'From priority

1 to' line of the 'To-do list settings' dialog, you will ensure that only to-dos in that priority range will appear in your Day view. By setting the value to a low number such as 1 or 2 you'll be sure not to miss those important things to do, without cluttering your Day view pages with trivial items with low priorities (the ones with *high* numbers—remember, priority 1 is most important, priority 9 is least important).

Series 5

Although many of the menu options are a little different on the Series 5, the majority of functions work similarly to the Series 3, as described above.

To configure the Day view, press [Psion]-[K] to go to 'View preferences...', configuring the dialog as described for the Series 3. Notable differences are:

The Series 5 dialog shows a new option, 'Standard entry type'. This selects the default entry type when you just start typing into that page of the Day view. You can always override this preference by choosing the menu command 'Entry | Create new entry' instead of just typing your entry text, but make life easier by setting the default as 'Day entry', 'To-do', 'Event' or 'Anniversary'—whichever you use most frequently. Most people will select 'Day entry' for this view, but it depends upon how you use your AGENDA.

Tapping on the 'Slot Definitions...' button brings up a dialog identical to that on the Series 3, from which you can configure the two halves of the display (refer to Series 3 instructions above).

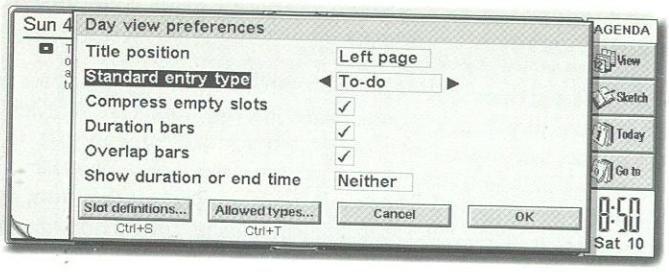
Tapping on 'Allowed types...' pops up a simple checklist where you can tick the entry types you wish to appear in the Day view. Remember that if you check 'To-dos' then *all* of your due (or overdue) dated to-dos will appear in the list, regardless of their priority setting.

Configuring the Week view

The Week view of both machine types can be customised to your own preferences, though to a lesser degree than the Day view.

Series 3

Pressing [Psion]-[Q] to 'Set preferences...', then [Psion]-[W] to go to the Week view preferences will bring up a small dialog. This enables the 'Title position' to be set to left or right, as with the Day view preferences, together with the duration and/or end time of each entry (again, as in the Day view). The 'Allowed types...' line of the dialog is again used to specify which entry types will appear in this view. 'Timed', 'Untimed', 'Anniversary' and 'To-dos' can all be turned on or off as desired. Bear in mind that the Week view will always show seven full days, so the slot for each day is very small. The more categories you elect to show in this view the more crowded the view will become. With the more detailed Day



Setting the Day view preferences on a Series 5

view never more than a keypress away ([Shift]-[Psion]-[D]), you're probably better off minimising what appears in the Week view, thus avoiding endless scrolling. If you elect to show to-dos in this view, remember that the same priority considerations apply as for the Day view.

Series 5

Once again similar to the corresponding view on the Series 3, the Series 5 allows for a 'Standard entry type' to be defined, as in its Day view. Most users will want to set this to 'Day entry' for maximum convenience.

Year view

Series 3

Far simpler to configure than the Day and Week views, press [Psion]-[Q] to 'Set preferences...', then [Psion]-[Y] to go to the Year view preferences. The familiar 'Show duration or end time' will appear, together with a 'Month to display at top' option. Set this to 'January' to show the current calendar year from January to December. If you want to see the next 12 months' worth of entries at *all* times, you'll have to manually update the setting at the beginning of each month.

Series 5

In addition to the Series 3 equivalent, it allows selection of whether one or all *Entry symbols* are allowed to show. We'll look at these in the next instalment.

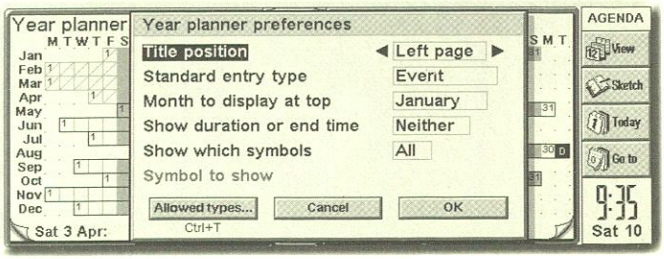
Anniversary view

Preference settings are limited to choosing the number of months that appear on the page (up to a maximum of four), together with the usual 'Title position' in the case of the Series 5.

List view

Unique to the Series 3 machines (at the time of going to press), the List view preferences can be set to show either every occurrence of repeating events or just the first one. Be careful if setting to 'Once only', as it's then easy to miss something.

In the next instalment we'll look at configuring the Busy and To-do views, together with the many options for configuring the text *within* your individual entries. Until then, keep experimenting with the options we've discussed until you're happy with the results.



Configuring 'Year planner preferences' on the Series 5

On the NET

A roundup of what's new on the web, and what's being said online

by Pete Sipple

Webwise

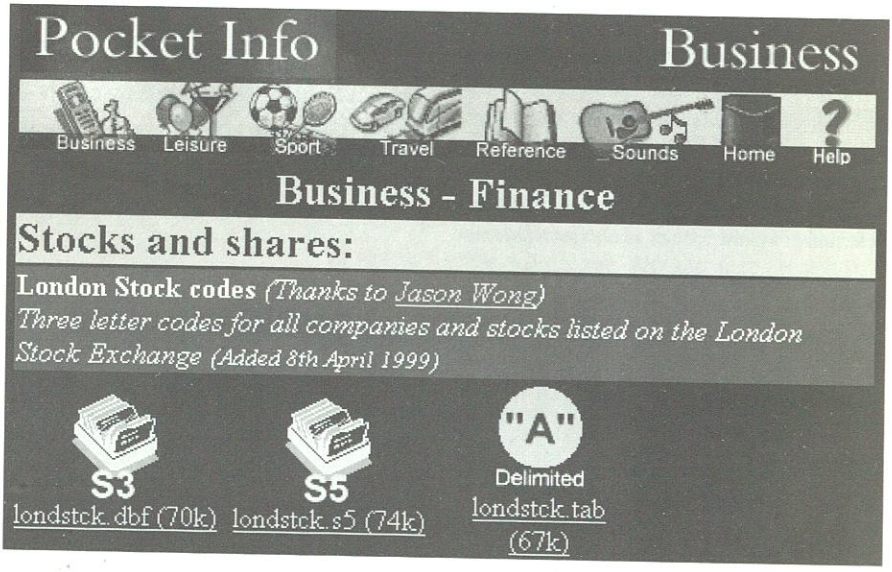
Expanding pockets

We all know that one of the Psion's strongest assets is its ability to store and retrieve information. At the *PocketInfo* site, you can download a huge amount of data for your Series 3 or Series 5. There are hundreds of mini-databases, spreadsheets, AGENDAs and Psion WORD documents available on all sorts of topics, such as airport information, tourism, finance, sport and history as well as fun items like '101 reasons why the chicken crossed the road' and full episode listings for TV shows like Friends and Star Trek. There's bound to be something to interest you at this site.

www.pocketinfo.org

CeBIT blues

From the huge number of messages posted on the Usenet newsgroups, lots of people were expecting to see the launch of a new machine, being dubbed by many as the 5mx, at the recent CeBIT show in Hannover. The lack of anything new provoked more than one tongue-in-cheek posting...



"Even though Psion was unable to come up with a 5mx in time for CeBIT or make use of a colour screen, rumour has it that Psion has a strategic plan: the Siena mx! The Siena mx will offer the same one inch screen as before but add value by including the special 'high glare' screen technology from the Series 5 (except there will be no backlight.) The one inch touch sensitive screen will be large enough to allow users to sign their initials for sending faxes (provided they also buy Psion's proprietary 14.4Kbps modem technology or an adaptor for $150). No doubt some people may be hoping for a 5mx in time for Christmas of this year. Although no such thing will happen, Psion will release a special, limited edition Siena 2000 made up of the exact same technology as the Siena mx, but with a pearly green case. This *Millennium edition* Siena will retail in the $400-500 range and be available for purchase only on Concorde flights between London and New York. Bill must be breathing a sigh of relief." (cpetrov@sas.upenn.edu)

"Keeping it away from CeBIT raises a few questions: (a) is it very early in development, and looking embarrassingly like a prototype? (b) does it have a major design problem, and they don't want to change the appearance after its release? (c) are they awaiting a deal with another company to include a particular hardware or software component and they want to announce everything at once? Or (d) did they simply believe assurances from their R&D department that it will easily be ready for the show?" (mk@expansys.co.uk)

Fooled you!

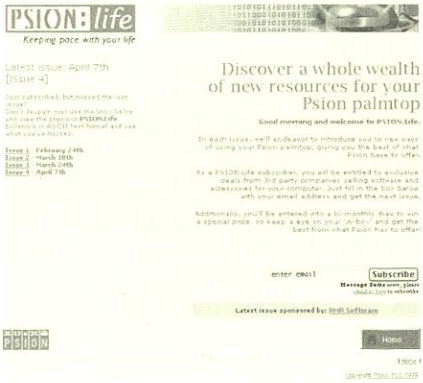
Well done to the perpetrators of two April Fool pranks...

Firstly, this message caught more than a few surfers, "There is no need to upgrade to a Series 5 anymore if you own a Psion Series 3a/3c/3mx and the new *TouchScreen* Software! TScreen supports writing, drawing, editing and erasing *directly* to the screen of your Series 3a/3c/3mx! Special offer on April 1st, 1999: You can get it FOR FREE if you download TODAY!" (peter.widenmeyer@t-online.de)

The prize has to go to the *5alive* website for announcing that Palmscape were soliciting 50 testers required for their "new colour EPOC machine due for release in April". Emailers to Palmscape were replied to by an 'Avril Premier'. Fooled a few people, but I won't mention you by name, Mr Keating of Bedford!

Staying in touch?

If you haven't visited the Psion web site recently, it's worth stopping by just to join *PSION.Life*, a mailing list that's been running since the end of February. Every couple of weeks you'll receive news from Psion, some special offers and the chance to win a prize. Register by visiting *www.psion.com*, or if you don't have web access, you can join by sending an email to *majordomo @life.psion.com*, with a subject of 'SUBSCRIBE'.



HINTS & TIPS

Every item published in this section wins the author TWO free issues added to their subscription!

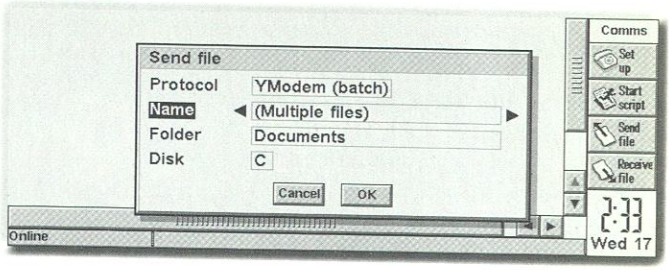
Beaming multiple files

If you've ever wanted to 'beam' an entire application or set of document files over to someone with another Series 5, you'll be aware how tedious it can be going through the send/receive process once for each separate file. I've discovered two ways of getting around the problem.

Firstly, why not try using Purple Software's *Navigator* or the shareware *RMR5ZIP* to 'zip' the files and folders together into one single archive file? It's then a simple matter to beam over the archive and 'unzip' it at the other end (provided the recipient also has the necessary unzipping software). Do make sure you unzip it into the right folder, though.

Secondly, and slightly more devious, there's a way of selecting multiple files for beaming, by using the built in COMMS application.

1. Ensure the 'Remote link' is set to 'Off' from the system screen.
2. Start the COMMS program by tapping it on the Extras bar.
3. Under 'Tools|Communication' settings, set 'Use comms port' to 'Infrared'.
4. Use 'Transfer|Send file...' and select 'YModem (batch)' as the protocol.
5. Select the appropriate disk and folder in the 'Send file' dialog and press [Tab] while on the 'Name' line of the dialog. Then hold down the [Ctrl] key while tapping on the names of the files if you wish to select non-sequential items in the list, or [Shift] to select a contiguous range of files. Press [Enter] when done and you should see '(Multiple files)' on the 'Name' line of the dialog.
6. Set up the other Series 5 in similar fashion using the 'Receive file' command.



Beaming of multiple files— all is revealed

Set the protocol to 'YModem (batch)' again and select a folder you wish to receive files into.

7. Tap on 'OK' on your machine to start sending files to the other Series 5.

The procedure is much quicker to do than describe and has proved a valuable time-saver for me in the past.

Richard Poole, Bridgwater
(compiler of the official S5Tips database)

Pen and screen problems

If you find that your Series 5 touch screen doesn't respond as you expect, it may need recalibrating. Obvious symptoms are tapping on the drive letter indicator on the system screen's title bar and finding the file manager appear instead, or finding that you keep putting zones and power lines in slightly the wrong place in *SimCity*. If that happens, you need to go to the 'Screen' entry in the 'Control panel', press the 'Calibrate' button, follow the instructions, and all should be well again.

John St. Clair
Johannesburg, SOUTH AFRICA

Message Suite problems

If you travel a lot and have to fight with hotel telephone systems to collect your email, it can sometimes be worth getting Message Suite to generate log files of its activities to help in diagnosing any problems. To do that, you need to create new folders on the C: drive. These should be called:

- C:\logs\netdial (contains the commands sent in logging on, together with the responses of the remote system).
- C:\logs\email (contains the full log of all the send and receive transactions in the last connection).
- C:\logs\mailtext (contains the text of the last messages to be sent and received).

All these folders contain plain text files, and can be read in newer versions of Message Suite by double tapping them from the System screen.

If you need to send them to someone else to help diagnose a problem, remember that your mailbox password will be clearly visible in the file.

If you send fax messages, then creating a C:\logs\fax folder will cause those log files to be created as well.

David Cleary
Abingdon, Oxfordshire

Series 3 Delete/shift-delete

Reading through some back issues of *Palmtop*, I noticed the hint from Jan Henson in issue 20 that the Series 3 [Delete] key actually puts deleted text into the clipboard. As Jan points out, that means you can recover any text you've accidentally deleted by pasting it back in with [Control]-[I]. The clipboard therefore holds the most recently deleted text, but there is a way you can delete text *without* it going onto the clipboard. Simply use [Shift]-[Delete] to get rid of a highlighted block and it *won't* be added to the clipboard. This can be very useful if you want to hold a particular piece of text on the clipboard (such as a long phrase or description), to re-use several times when editing a document.

Vince Holly
London

Access Psion graphics on Macs

PC users already have access to Psion graphics formats via PsiWin. Apple Macintosh users can enjoy even more graphical flexibility with Thorsten Lemke's fabulous shareware *GraphicConverter* program (available from *www.lemkesoft.de*, $35 to register).

This superb utility allows over 40 graphic format conversions including Series 3 (PIC) and Series 5 (MBM) files. One frequent use of mine is to download maps (e.g. those from *www.streetmap.co. uk*) and convert them into scrollable maps for my Series 3c which I can then view on the Psion with the freeware *Firepic* application.

Mike Watts
London

We use GraphicConverter extensively here at *Palmtop*. It's used to batch-process all our screen shots from PIC, MBM, BMP, JPEG and GIF formats, for final processing in Adobe Photoshop. Highly recommended, and GraphicConverter has been included on Palmtop CDs from CD06 onwards - Ed.

Printing individual to-do lists

In Q&A in the last issue, a reader asked whether it was possible to print single to-do lists from a Series 5. The answer was that it is not possible.

There is a way round this, though somewhat tedious, by allocating a different symbol to each to-do list and marking the entries accordingly. Individual lists can be printed by selecting entries marked with the relevant symbol. It is fairly simple to remember a few symbols (e.g. 'w' for work, 's' for shopping, 'd' for DIY, etc.)

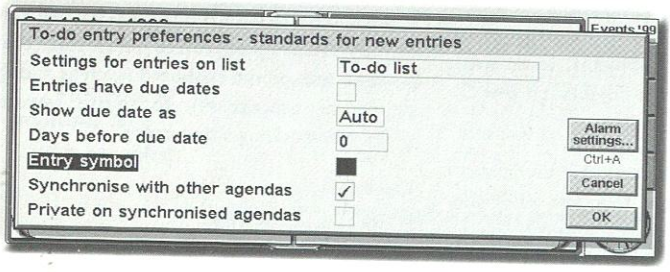
I have several to-do lists and to help me remember the symbol I include it in the list title, e.g. 'House calls (h)'. The only drawback is that it takes a little longer to make each entry. Symbols are of course case-sensitive, so it is advisable to stick to either upper or lower case to avoid confusion.

Emer Loughrey
Dublin, IRELAND

You can make the process a little less time consuming by allocating a default symbol for your most common entry category, under 'Tools|Entry preferences|To-do...' in your AGENDA - Ed.

Use your online help

Don't forget that all Psion machines have some very useful information on the built-in applications in their online help files. If you find yourself on a long journey with little to



Setting a default entry symbol for your to-do items

do, it's worth reading through the notes there to familiarise yourself with their contents.

Christopher Stone
Lansing, Michigan, USA

Extra bars shortcuts

By pressing [Ctrl] together with one of the program icons on the Series 5, you can launch whichever application appears on the Extras bar *immediately* above that icon. Also, by pressing [Fn] while tapping on a program icon you can create and open a new document for that program.

Tim Bryan
Forest Hill, London

More bytes for your money!

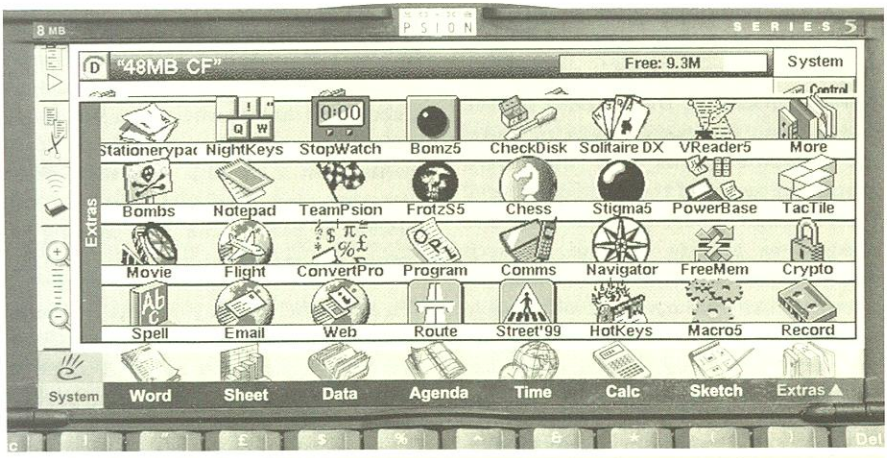
Are you concerned about every byte used on your Psion? If you have large number of software applications loaded on your Psion, you can usefully save a little space by carefully deleting some of the non-critical support files that are not needed for each application to function.

If you feel you can live without them, you can delete individual 'Help' database files from within the relevant \system\apps\ folder. If the software also uses a 'Splash.mbm' (or similar) splash screen file which appears for a few seconds when the program is fired up, you can sometimes delete this as well. Watch out also for those 'readme' files that tend to litter your system folder.

Many of these files are quite small, but they can add up to several hundred kilobytes in some cases—a worthwhile saving.

Also, note that rather than actually deleting them, it's safer to 'Cut' them into a temporary holding folder instead. If an application then complains you can just move the required file back to its original location. After a while without incident, you can finally delete these files.

Tim Bryan
Forest Hill, London



Quick access to the items on the bottom row of your Extras bar—just use the [Ctrl] key...

Q&A

Get your Psion-related questions answered by our editorial panel...

Psion-unfriendly web sites

Q Some web sites won't display in Message Suite or PsiMail Internet. Can anything be done about this?

Franz Keller
Dortmund, GERMANY

A **They are probably sites that use frames and/or Javascript for navigation (future versions of Message Suite will hopefully support these features). Ideally, web authors should provide a way for browsers that don't support those features to access the site, but in the real world many don't.**

If you really need to access such a site it's well worth emailing the site's author or owner and politely pointing out that they have made their site inaccessible to a range of users, including those with palmtop machines, the partially sighted with 'talking' browsers, and so on. Often the response shows that they were simply not aware of the consequences of their design choices, and the site changes to provide a route for such users. However, don't assume that all sites that use frames will be inaccessible to Message Suite, as many do indeed provide a 'no frames' version of the site, usually accessed from the home page of the site.

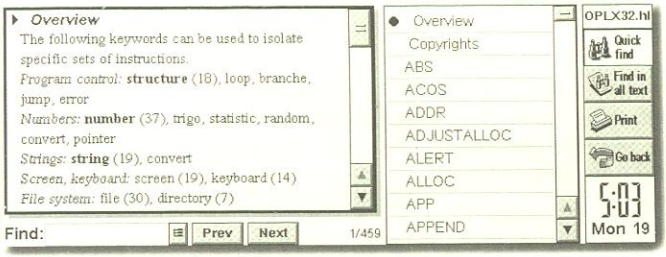
CF versus internal storage

Q I have an 8MB Series 5 with a 32MB CompactFlash disk. What is the best way to use this available storage space for AGENDA, DATA and so on, and also when using Message Suite? Does Message Suite automatically use the C drive for everything?

Esmond Robinson
London

A **There are probably as many ways of setting up a Series 5 as there are users, but a common solution is to use extra CF disk space in much the same way as SSDs on the Series 3 range, i.e. with all large files and applications stored on the CF. Smaller documents and often-changing files should be kept on the Internal 'C' disk. Although the claimed technical benefits of CompactFlash technology mean that it shouldn't matter *where* files live, there is always the risk when using large documents from a CF disk that the Psion's batteries may give way right in the middle of saving the file, leading to corruption and data loss.**

You are right to point out that Message Suite might play an important part in determining how you use a CF card. In addition to occupying the best part of 3MB just for the program itself, a real-world Message Suite installation also



An OPL reference in DATA format

needs at least 2MB of free memory to work effectively and efficiently. Once your personal documents have been taken into account, it's likely that the only way to achieve this situation is to install Message Suite onto the 'D' CF disk. And yes, although you should install the application itself onto 'D', there are various library files which need to be stored on your internal disk, plus of course storage space for emails and faxes you send or receive and a disk 'cache' of recently visited web pages.

I need a Spy!

Q Is there a Series 5 equivalent to the system memory monitor on the Series 3a that lets you see exactly how memory is being used on the machine. Better still, is there a Series 5 version of the useful *Spy* utility?

Graham Foster
Welwyn Garden City, Hertfordshire

A **The Series 5 doesn't have the same system memory limitations that were so relevant for the Series 3. There is a memory summary screen available on the system screen which will give you an idea of how much you're using, either for EPOC, running programs or for 'Internal' disk space.**

There's a version of *Spy* for EPOC, which will give you memory information and much more about individual processes, though it's only available as part of the C++ Software Development Kit. It may be that concerns over the utility's stability have stopped Psion from releasing it to a wider audience.

OPL/32 manuals online

Q Is there an OPL/32 equivalent of the really useful OPLman.dbf file, containing detailed information for OPL programmers?

Graham Foster
Welwyn Garden City, Hertfordshire

A **Yes, there are several versions of the OPL32 manual in Psion document form. See the *\library\s5prog* folder on our *Palmtop* CDs or look up *3lib.ukonline.co.uk/opl32.htm* on the Internet.**

Series 5 task switching

Q How can I cycle round the running tasks on a Series 5, or swap back to the last task I was running?

Graham Foster
Welwyn Garden City, Hertfordshire

Just as on the Series 3, Psion provide an easy way to cycle between running tasks on the Series 5. 'Cycling' is the term used for switching to one task after another on a multitasking computer, eventually ending up back at the task you started with. Although rather pointless when you consider the built-in applications (as you can just tap on their program icons at the bottom of the screen), the technique pays dividends when running a number of third party programs, which would otherwise have to be switched to using the 'Open files' list or the Extras bar.

To cycle between tasks, use [Ctrl]-[Fn]-[System], i.e. hold down [Ctrl] and [Fn] together and then keep tapping on [System] until the task you want appears on screen.

Also useful when interrupted is the simpler [Fn]-[System], which switches back to the last task used, i.e. the application you were working in before getting distracted (e.g. receiving a phone call and having to switch to AGENDA to arrange an appointment).

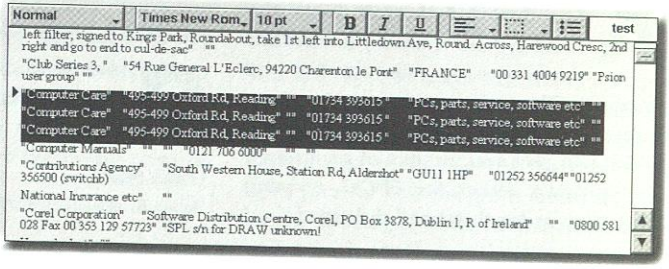
It's also worth noting that pressing a built-in application's icon will cycle through all running tasks using that application, e.g. cycling between DATA address books for personal and business use. In order to be able to open more than one document of each type in the first place, make sure 'Open multiple files' is set to 'Enter' from your system screen 'Preferences' menu.

Copying DATA entries

Q Can I copy database entries on my Series 5? I have lots of contacts located at the same organisations, and retyping common data is driving me crazy. If I try to copy and paste an entry it just dumps everything into the first field and returns an error. I'm sure my 3a let me do this.

Mark Bensberg
London

A One of the unfortunate side effects of the 'rich text' inside EPOC and the Series 5 is that end of line characters get handled differently, i.e. it's now quite acceptable to have carriage returns in the middle of text *within* a single field. This is why the two DATA applications behave so differently in this regard. On the Series 3, each end of line character was taken to mean 'move down to the next field' and flowing text into multiple fields was thus very easy. On the '5', there's no foolproof way for EPOC to know exactly which fields you'd like filled with information


Normal
Times New Rom
10 pt
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I
U
test
left filter, signed to Kings Park, Roundabout, take 1st left into Littledown Ave, Round Across, Harewood Cresc, 2nd right and go to end to cul-de-sac" ""
"Club Series 3," "54 Rue General L'Eclerc, 94220 Charenton le Pont" "FRANCE" "00 331 4004 9219" "Psion user group" ""
"Computer Care" "495-499 Oxford Rd, Reading" "" "01734 393615" "PCs, parts, service, software etc" ""
"Computer Care" "495-499 Oxford Rd, Reading" "" "01734 393615" "PCs, parts, service, software etc" ""
"Computer Care" "495-499 Oxford Rd, Reading" "" "01734 393615" "PCs, parts, service, software etc" ""
"Computer Manuals" "" "" "0121 706 6000" "" ""
"Contributions Agency" "South Western House, Station Rd, Aldershot" "GU11 1HP" "01252 356644" "01252 356500 (switchb)
National Insurance etc" ""
"Corel Corporation" "Software Distribution Centre, Corel, PO Box 3878, Dublin 1, R of Ireland" "" "0800 581 028 Fax 00 353 129 57725" "SPL s/n for DRAW unknown!

Duplicating exported entries in WORD

from the clipboard, or indeed which bits of the information to put in which field. Ideally the solution would be a new (intelligent) 'Copy entry' menu command, but that will perhaps happen in future versions of DATA.

In the meantime, here are two workarounds.

- If you've got a lot of entry copying you need to do, use 'Export as text file...' (choosing options 'Double quote' and 'Tab') to create a plain text file, e.g. 'MyData.tab'. Next, open this file up in WORD and copy the appropriate lines as many times as required. Use WORD's 'Export as text file...' and create a new text file, e.g. 'MyDataEdited.tab'. Finally, create a new DATA file from your original (to preserve the label layout etc.) and use 'Import text file...', choosing the new text file and with the same options as before.

- If you've only got a few entries to copy, it's best to do things manually. Highlight the entry to be copied in the DATA card view and copy the information to the clipboard. Tap on 'New entry' and move to any convenient large field (e.g. 'Notes'). Use [Ctrl]-[V] to paste the information in. Now, by selecting different parts of it and using [Ctrl]-[X] to 'Cut' and [Ctrl]-[V] to 'Paste', it's possible to fill the fields correctly and quickly.

Printing maps with Route Planner and Street Planner

Q I use Palmtop BV's *Route Planner* and *Street Planner* software quite extensively, and find them immensely useful. Although I can print out lists of directions and view detailed maps on screen, I can't find any way to print out paper copies of a selected map area.

Andrew Gilmore
The Hague, NETHERLANDS

A With many data-based products, copyright often exists on the original data. In the case of Route Planner, copyright limitations prevent the authors from making the map data freely printable.

Early versions of Street Planner (which uses a completely different dataset) didn't allow printing of map sections, but version 1.4 onwards *do* include a map printing feature. This is accessed from the 'Map|Print' menu option, and allows map fragments to be enlarged to fill an entire page, and to be printed at a number of different resolution options. If you have an earlier version you can download a free upgrade from Palmtop BV's web site: *www.palmtop.nl* .

On a more general note, you can always grab *any* screenful of information from both Series 3 and Series 5 machines, simply by 'capturing' the current screen (the very technique we use to create all the screen shots within the pages of *Palmtop*). Here's how:

Series 3 - press [Psion]-[Shift]-[Control]-[S] while on the screen you wish to capture. This will create a file called SCREEN.PIC in the top level directory of your internal drive.

Series 5 - press [Fn]-[Shift]-[Ctrl]-[S] while on the screen you wish to capture.

Musings...

Stephen Murgan reflects on Psion's US marketing strategy, and their curious product naming policy...

Transatlantic 3mx

One of the things that has always annoyed me about Psion in bygone years is their preferential treatment of the US market. The Americans were the first to see a model with an integrated spreadsheet (the US-only 'Series 3s') way back in 1992 and the first to get a model with a backlight (first Psion UK told us that we didn't really need a backlight, then they finally admitted that they just didn't have enough backlight parts to go round).

This is understandable, since the US market is perhaps more fickle than most. Americans are more gadget-oriented (after all, they invented the word) and brand-loyal than the Europeans, so Psion have to fight that much harder to make a name for themselves—particularly in view of the fact that most of their competition is from household name mega-corporations, some of whom spend more on R&D than Psion is worth in total. Lacking a backlight, for instance, would have severely damaged sales in the USA.

And so it seemed to me an ironic but frustrating when I heard that that the 3mx would not be released in the USA. There was a lot of noise on the Usenet newsgroups at the time from disgruntled Americans, frustrated that the fastest Series 3 ever would not be made available to them, along with a lot of variations on the theme of "Now you know how it feels" from the other side of the Atlantic.

But why was the machine not released in the USA? Well, one of the rumours that received general acclamation was that Psion didn't want to hurt sales of the Series 5. However, the word from Psion themselves was that the anticipated demand wasn't high enough to warrant the expense of building a US-specific ROM chip, which differs from the UK version in areas such as key mapping, spelling dictionary, thesaurus, etc.

For a while, it was only possible to get one by having it specially imported from the UK by one of the few dealers who were prepared to do this. Finally, faced with unexpected Stateside demand, Psion Inc (Psion's US subsidiary) relented and started selling them in North America. Unfortunately, they still cannot justify the expense of building a new ROM, so the 3mx models on sale in the US are all imported UK models.

What's in a name?

To the casual observer, Psion's naming conventions seem to have been somewhat odd of late, though with good reason.

The eagerly anticipated successor to the Series 3 was not the Series 4, but the Series 5. Some say that the 'Series 4' was the Siena, while others point at the negative connotations of the number '4' in some Eastern cultures.

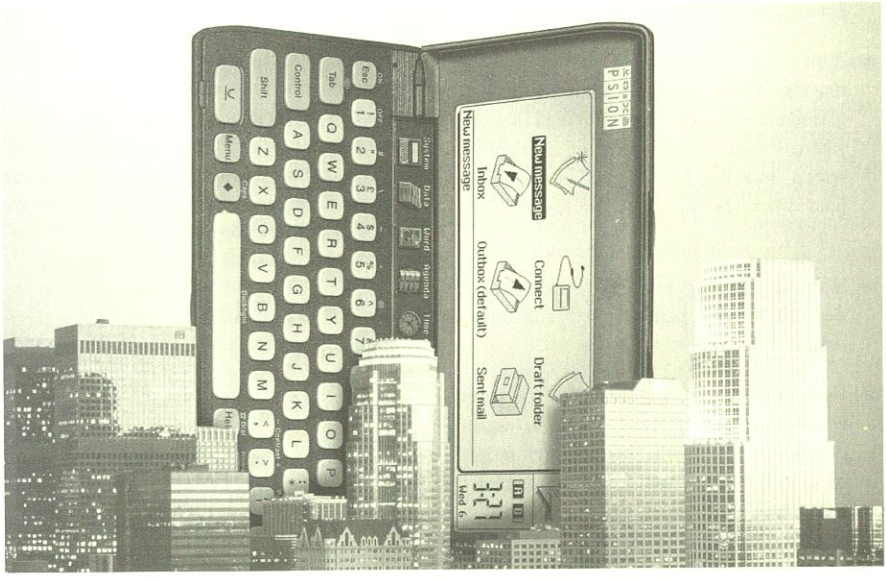
Even within the 3 series, the 3a gave rise to the 3c (the '3b' moniker was ostensibly dropped as some people apparently associate the letter "b" with "Beta test"). This reminds me of the marketing of the GM Nova car in Spanish-speaking countries—ignorant of the fact that in that language "No va" means "Won't go". When they renamed it the "Corsa", sales soared).

When the new machine came out, I wasn't surprised that it was not called the '3d' (users would probably expect a holographic screen), but '3mx'? Where did they get that one? Psion say it is named after the processor, something they have never done before. I would have preferred '3c Turbo', a term which sums up what the machine is all about—speed. Unfortunately, I doubt that Psion would agree to this name.

The Series 3 range has been with us for nearly a decade now. While the machine has grown a lot in that time, the change has been far less dramatic than with other technologies. The PC, for instance, has gone from 386 processors running at 33MHz to Pentium processors running at 450MHz and beyond, from Windows 3.1 to Windows 98, and still the Series 3 keeps on going. How many computers do you know that can make people say "Wow! That's a nice machine" so many years after its inception? Indeed, such is the versatility of the range that they have survived the advent of their own progeny—the Series 5.

Last of the breed?

For all its benefits, I still get a nagging feeling that the 3mx is the last incarnation of the 3 series. I suppose I expected more (what techno-geek doesn't?), and feel Psion—particularly in the USA—are launching this new product with more of a whimper than a bang. For those in the US for whom the English/American 'language' barrier isn't a problem, it is a very useful and powerful tool. It is a shame that the average American buyer cannot get past the twin hurdles known as "Who makes it?" and "Why doesn't it have a colo(u)r screen?"



Problems with your Psion ?

Here are some useful guidelines if you think you may have a hardware problem with your Psion palmtop:

Things to check

Before even thinking of picking up the phone, make sure you've checked the following, if only to save your own embarrassment if it turns out to be something easy to solve:

- Are the main batteries OK? The Psion's own battery information option (from the System screen menu) will give you an indication of their health, otherwise you might want to invest in a cheap battery tester. If in doubt, replace them with brand new 'alkaline' batteries. Note that rechargeable batteries have a much shorter life and do not always give accurate readings with the Psion's own battery checker.

- If the screen appears to be faulty, it could be that the contrast just needs adjusting. If set to minimum you will have a blank screen, whereas maximum will give you an all-black screen. To adjust the contrast on a Series 3, hold down [Psion]-[.], on the Series 5, it's [Fn]-[.]

- Is the screen calibration OK? (Series 5 only). Go into 'Control panel|Screen' and recalibrate it.

- Have you tried resetting the Psion? If it's still possible to backup the unit, do so again unless you know you have a very recent backup. Then try a 'soft' reset. If that doesn't sort things out, try a 'hard' reset (see the manual for details on how to do this). If neither work, it's always worth unhooking all cables, removing *all* the batteries (AAs and backup cell) and leaving for 30 minutes. Put the batteries back in and try again, restoring your data if the Psion comes back to life.

Checks complete, but the fault is still there?

If all the above advice fails to help, it's best to contact the experts. If outside the UK, you'll have to contact your local distributors for support options. You can find a list of worldwide service agents at www.psion.com/international/ . If within the UK, read on...

Machine repairs

If your machine has developed a hardware fault, you may find that your supplier (particularly if a High Street store) may have an arrangement for replacing your faulty machine. However, most people get their units repaired either by Psion themselves or by POS Ltd. If your Psion is still covered by the 12 month warranty, you should definitely contact Psion. If it is older than a year then you have a choice, although prices are generally similar between the two.

Repairs by Psion

The Psion repair centre can be contacted by telephone on 0181 575 9919, or by email at *uk-repair@psion.com* .

If in the UK send the broken palmtop by Registered post or by courier, to:

Psion UK Repair Centre
Unit 6 Derby Road
Metropolitan Centre
Greenford
Middlesex
UB6 8UJ

Psion do not guarantee to save data that may be on your machine, *so it is important to backup your data first if at all possible*. You should remove the batteries (if your data is safe), stylus and SSDs/CFs. Package the machine securely, and enclose a covering letter describing the fault and supplying a daytime phone number and delivery address.

Remember to keep a note of your machine's serial number, as you may need to quote this if contacting Psion.

- On a Series 3 Classic, this is on the bottom of the machine on a sticker surrounding the speaker, beginning with the letters 'EBA'.
- On a Series 3a the number is on a transparent label inside the 'A' drive compartment, beginning 'FBA', 'FBB', etc.
- On a 3c it is in the same place as the 3a, but on a silver sticker with a barcode on it: beginning with 'JBB', 'JBC', etc.
- On a 3mx it is in the same place as the 3a, but on a silver sticker with a barcode on it: beginning with 'LB', etc.
- A Siena has its serial number underneath the front AAA battery, beginning 'HBB' or 'HBC'.
- The Series 5 has its serial number on a sticker with a barcode either inside the compartment with the backup battery or in the 'D' drive compartment, beginning with 'KA00', 'KB00', etc.

Attach some proof of purchase if the repair is a warranty job. Psion will acknowledge receipt of the palmtop into their system, billing you if the repair is chargeable, and will usually return the fixed unit within about a week, by courier.

Technical support

If you have a software or operational problem, you may wish to contact Psion's Technical Support department. Their telephone number is 0990 143061 and their email address is *uk-support@psion.com* . If you have access to the Internet, then you will find the answer to many common questions and problems at *www.psion.com/support/* .

Repairs by POS Ltd

POS Ltd. offer a similar postal service (contact them for details), plus 'while you wait' repairs at their high street shop at 143 Streatham High Road, London SW16 6EG. Providing you've booked an appointment, repairs can generally be done on the spot in 1-2 hours.

Telephone POS Ltd. on 0181 677 9246

The Psion Reference

UseNet Groups

comp.sys.psion.announce
comp.sys.psion.misc
comp.sys.psion.comm
comp.sys.psion.apps
comp.sys.psion.programmer
comp.sys.psion.marketplace
comp.sys.psion.reviews

These newsgroups are the unmoderated discussion groups on the Internet. It's easiest to access them via a desktop machine using Microsoft or Netscape web browsers (choose 'Read newsgroups' or similar on their menu), but you can also access them on a Psion if you're really determined by using the web-based reader at *www.dejanews.com* . A newsreader client for the Series 5 has still not been developed.

There are also digests, with daily messages sent by email. Subscribe to the Series 5 version at *www.pinkworks.com/pda/s5list.html* .

Proprietary discussion forums

AOL - Psion Noticeboard	Psion/General noticeboard - Keyword: Psion
CompuServe Psion discussion	GO PSION
CiX Psion conference	join psion join cixed

Psion-related software

3-Lib shareware library	*3lib.ukonline.co.uk*
CiX	'join psion', then look in '/files' and '/s5_files' file lists
CompuServe	GO PSION
Palmtop Software Directory	*www.palmtop.co.uk/softsubp.htm*
PsionKing	*www.psionking.com*
Usenet Binary Group	*comp.binaries.psion*

Psion FAQ

The Frequently Asked Questions document contains useful information, facts, names, addresses and numbers:

www.geocities.com/SiliconValley/8130/faq.htm

World Wide Web sites

Information

3-Lib	*3lib.ukonline.co.uk*
Armlink	*www.armlink.ndirect.co.uk*
Palmtop magazine	*www.palmtop.co.uk*
PocketInfo	*www.pocketinfo.org*
Psion plc	*www.psion.com*
Symbian	*www.symbian.com*

News

5 Alive!	*5alive.psionking.com*

Software houses

Atelier	*www.atelier.tm*
Palmscape	*www.palmscape.com*
Palmtop BV	*www.palmtop.nl*
Purple Software	*www.purplesoft.com*
RMR Software	*www.rmrsoft.com*

Miscellaneous

Directory of software authors	*3lib.ukonline.co.uk/authors.htm*
FoxPop	*www.foxpop.ndirect.co.uk*
Online with your Psion	*ourworld.compuserve.com/homepages/Jochen_Siegenthaler/*
Psilocybe	*www.psilocybe-search.com*
Psion medical	*dnausers.d-n-a.net/dnethWMo/psionmed.htm*
Start@EPOC	*www.planetepoc.com*
The Flip Side	*3lib.ukonline.co.uk/flipside/flipside.htm*

Using the Palmtop CD-ROM

- Windows users who receive the CD should double-click on the file 'Start.htm'. On most PCs the web browser will leap into life and display the CD interface. If nothing happens, or if Windows asks how the file should be displayed, cancel the operation and install a 'web browser' application such as *Microsoft Internet Explorer* or *Netscape* (these can be found on almost all PC magazine cover CDs). After installation, try double-clicking on 'Start.htm' again.

- DOS, Amiga and Archimedes owners may be restricted in what they can view on the CD, but will still be able to browse the 3-Lib library section and copy off the software as needed.

- Macintosh users should simply drag the 'start.htm' file onto their web browser, where it will load the interface just as on a PC. Please note that the Psion screen saver, demos and Emulators are all designed to run on PCs, so they will not work directly on your Mac.

Notes

1. PC users please note that your operating system may set all files retrieved from the CD to 'Read-only'. This shouldn't cause a problem for 99% of applications, but you may have to manually change file properties (e.g. use [Control]-[P] on the Series 5 itself) if you have problems with running or removing software.

2. PC users who install a new web browser should note that it often comes with its default start page set to the maker's web site, meaning that it tries to go online. Just go into its 'View|Options' dialog (or similar) and set the start page to a file local to your computer (e.g. the Palmtop CD Start.htm file).

Some people may experience a 'Check failed at line 1691' error when installing the Series 5 demo that appears on CD07 onwards. If you see this, click on [OK], then [Cancel] and finally [Yes]. Although installation has then been terminated, the demo *will* still run fine. Double-click on 'PsionS5.exe' in the *\S5demo* folder on your hard disk.

Obtaining the Palmtop CD-ROM

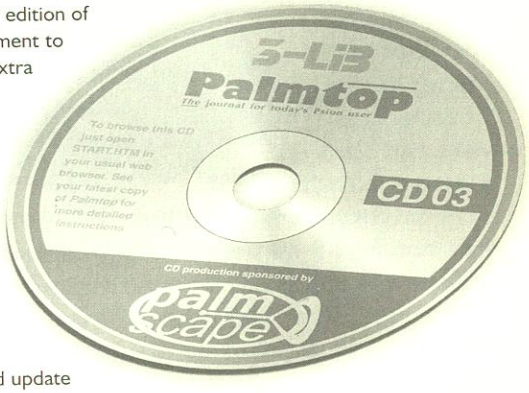
The *Palmtop* CD-ROM is now given FREE with all new subscriptions and resubscriptions received.

If you wish to obtain the CD before your resubscription is due then you can either resubscribe early or obtain it from 3-Lib (see opposite page for details).

Palmtop CD Plus

CALL our order hotline on 01869 249287!

For readers who wish to receive EVERY edition of our CD, you can now take out a supplement to your subscription whereby you pay an extra amount to get SIX CDs (approximately every two months, but separate to the magazine). The extra cost for this is **£20** in the UK, **£25** elsewhere. **If you wish to take up this option then simply contact us at the address given on page 1.**

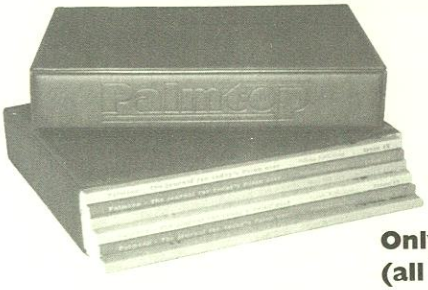

3-Lib
Palmtop
The journal for today's Psion user
To browse this CD just open START.HTM in your usual web browser. See your latest copy of Palmtop for more detailed instructions
CD03
CD production sponsored by
palm scape

• The CD is re-pressed and updated APPROXIMATELY every two months, but this will vary. We have a standard number of CDs pressed every time, and update it every time we run out. In any case you will receive SIX EXTRA CDs for your money.

• Note that the majority of the content *does not* change from disk to disk. As an example, CD06 had about 100 new and updated programs that were not on CD05, from a total of over 2000.

Alternatively, you can always buy single copies of the latest Palmtop CD from the ***3-Lib*** *shareware library for £13 each (including worldwide postage). Tel: 0118 9265081 or send your cheque, payable to* ***Steve Litchfield*** *to 22 Grays Crescent, Woodley, Reading RG5 3EN, England.*

Keep 'em SMART!



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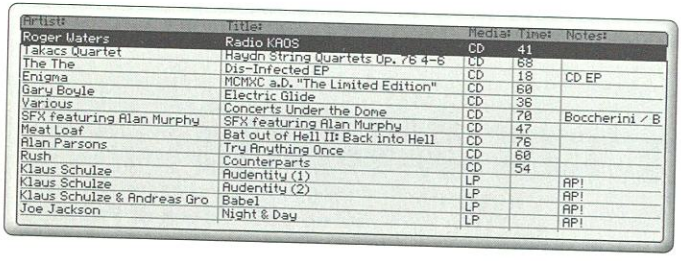
Top 10 freeware programs

The top 10 rated free software programs:

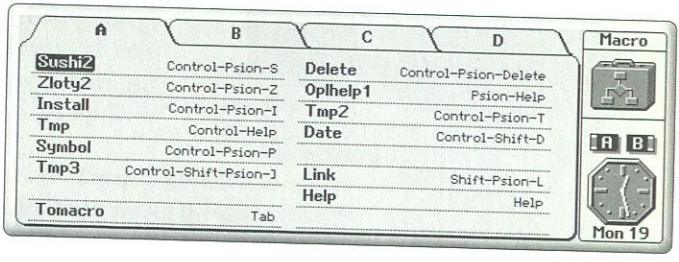
Place	Title	Author
1	JBData (Series 3 database)	John Boyce
2	MacSys (Series 3 macro system)	Tom Dolbilin
3	JBTree (Series 3 file manager)	John Boyce
4	Pason (Series 3 password system)	Andrew Lord
5	eTxtRead (Series 3 etext reader)	Peter Muys
6	Psi-On (Series 3 password system)	Paul Hargreaves
7	Greedy (Series 3 Monopoly clone)	Fred Botton
8	JBLaunch (file and document launcher)	John Boyce
9	JBFind (file finder)	John Boyce
10	Macro5 (Series 5 macro system)	Pascal Nicolas

Note: The freeware survey started life on the 3-Lib web site and votes have been cast over the last three years. The survey is ongoing at the EPOC Plus web site (www.epocplus.com/survey.html). If you haven't voted yet, then get on line!



Artist:	Title:	Media:	Time:	Notes:
Roger Waters	Radio KAOS	CD	41	
Takacs Quartet	Haydn String Quartets Op. 76 4-6	CD	58	
The The	Dis-Infected EP	CD	18	CD EP
Enigma	MCMXC a.D. "The Limited Edition"	CD	60	
Gary Boyle	Electric Glide	CD	36	
Various	Concerts Under the Dome	CD	70	Boccherini / B
SFX featuring Alan Murphy	SFX featuring Alan Murphy	CD	47	
Meat Loaf	Bat out of Hell II: Back into Hell	CD	76	
Alan Parsons	Try Anything Once	CD	60	
Rush	Counterparts	CD	54	
Klaus Schulze	Audentity (1)	LP		AP!
Klaus Schulze	Audentity (2)	LP		AP!
Klaus Schulze & Andreas Gro	Babel	LP		AP!
Joe Jackson	Night & Day	LP		AP!

JBData in 'list' view



MacSys in action

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£69.50*

£95*

£119*

Available April 1999

£180*

Available April 1999

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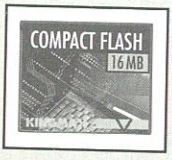

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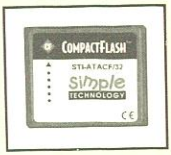

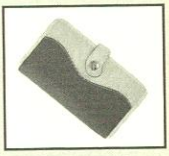

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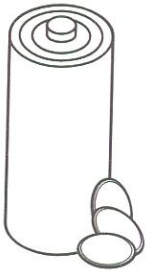

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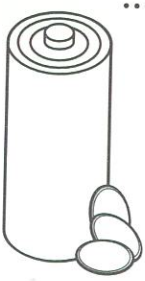

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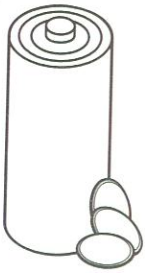

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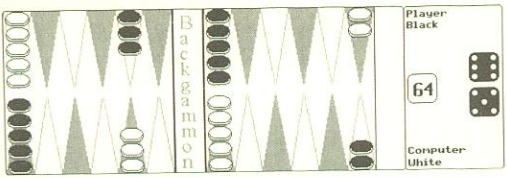

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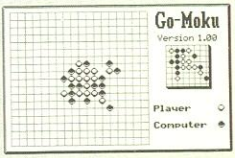

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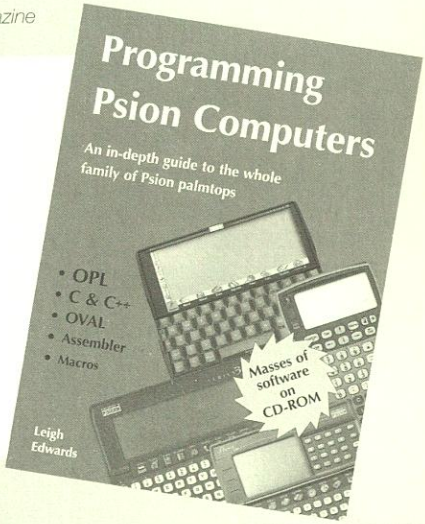

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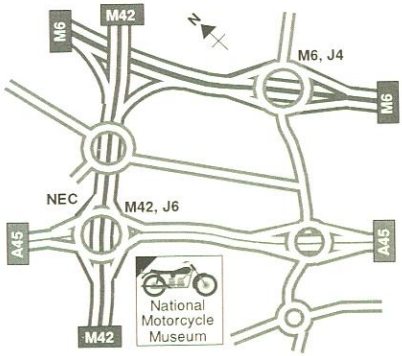

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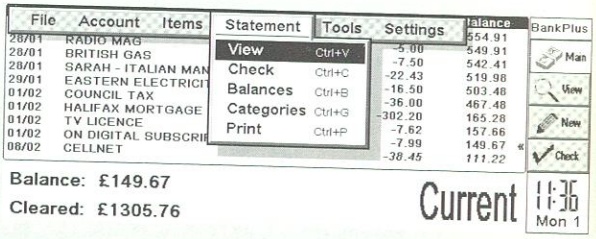

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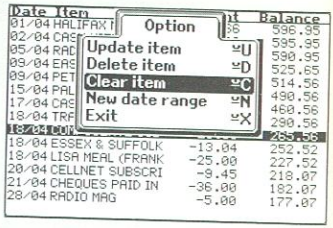

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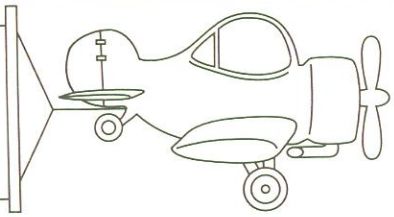

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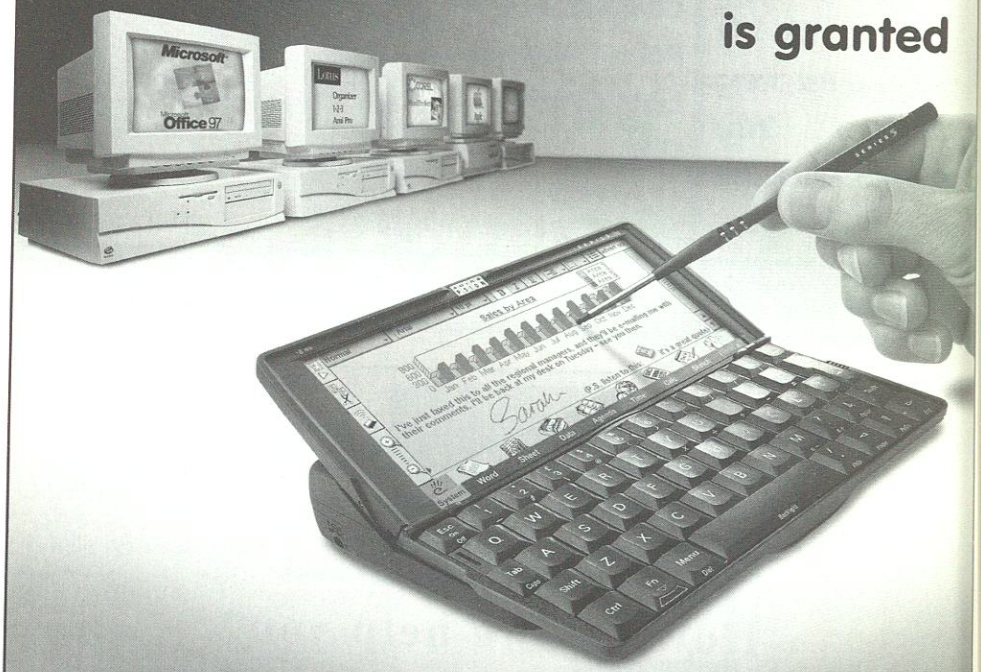

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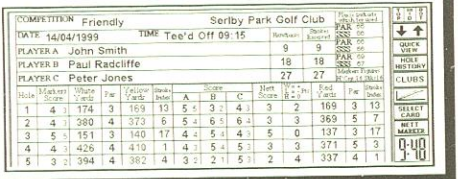

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- Setting up your Psion with a free Internet account
- Hotkeys - the tutorial we couldn't squeeze into this issue...
- A guide to the second-hand market in Psion machines and accessories
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